

# Introductory Chemistry I (CHMA10H) Fall 2013 Syllabus (Tentative) University of Toronto at Scarborough



Welcome to CHMA10! This course will provide an introduction to the study of chemical properties and transformations of matter from both a macroscopic and microscopic perspective. To be enrolled in this course you must have previously completed senior-level chemistry in high school (SCH4U or its equivalent) or have permission of the course instructor.

Please take a few minutes to read through this document. It contains important information which will help you to succeed in this course.

## Staff:

#### **Instructors:**

Professor Heinz-Bernhard Kraatz: SW632, Email: bernie.kraatz@utoronto.ca

- Office Hours, September 4th October 17th, Mon and Wed 4:00-5:30 pm in SW632 Professor Xiao-an Zhang: SW511, Email: xazhang@utsc.utoronto.ca
- Office Hours, October 21st December 2nd, Mon and Wed 4:00-5:30 pm in SW511

#### Lab Manager:

Dr. Scott Ballantyne: Room Number SW155C, Email: sballant@utsc.utoronto.ca

- Office Hours: Mon. and Wed. 10:30 - 12:00 pm

## Email Policy:

Please use a valid "utoronto.ca" or "utsc.utoronto.ca" account for all CHMA10 correspondence. Emails sent from other accounts are frequently filtered out as spam and may not be received. When composing your email, please use professional language. Be sure to include the course code as part of the subject line and sign the email with your first and last name, as well as your student ID. Your email will be answered as soon as possible (likely within 36 hours, unless it is a weekend or holiday).

**A note on email content**: Please double check this syllabus before emailing us with a question. Questions on the lab material should be directed to the lab coordinator or your TA.

## Textbook:

Chemistry: A Molecular Approach, First Canadian Edition, by Nivaldo J. Tro, Travis Fridgen, Lawton Shaw

Possible options:

1. Hardcopy--The bookstore is selling the textbook with Mastering Chemistry and the selected students solutions manual at a package.

2. Digital ONLY--The Digital Access only is available at UTSC bookstore at the cash register; alternatively students can go online to www.masteringchemistry.com and purchase access to Mastering Chemistry with the E-text;

Note that the Digital only option does not give students access to the students solutions manual, which can e purchased separately.

#### Online Homework:

There will be weekly homework assignments to be completed using the online homework system MasteringChemistry. If you purchase the bundled textbook package at the UTSC bookstore, your MasteringChemistry registration code will be included. If you acquire a copy of the text from another source, you may purchase MasteringChemistry code separately from the UTSC Bookstore.

Assignments will be released every Wednesday at 5:00 pm and will be due the following Wednesday at 9:00 am. Late assignments will not be graded.

You can activate your MasteringChemistry account at <a href="www.masteringchemistry.com">www.masteringchemistry.com</a>. A detailed instruction for MasteringChemistry registration and login, provided by Pearson, is posted on Blackboard. Please carefully follow this instruction. Once signed in you can: click the Join a Course button on the bottom of the page, and enter your Course ID (CHMA10Fall2013); Launch your eText; or Explore the Study Area. Finally, it is very important to enter your Student ID.

<u>In addition, the following YouTube video may also help you for registering with Mastering Chemistry:</u>

http://www.youtube.com/watch?v=tLUgNZ-FQyw&feature=youtu.be.

#### Website:

CHMA10 maintains the Blackboard web space which archives a variety of course-related information. There are two instructors for the course and at the beginning of each of their sections, they will inform you where you will find: contact information, class announcements, lecture slides, handouts, assigned readings, suggested end-of-chapter problems, and links to some useful outside resources.

\*Accessing WebOption Lecture Videos\*

WebOption lecture videos can be accessed at the Blackboard via the "Lecturecasts" link.

# Term Test – 25% of final grade:

There will be a 100-minute term test around the middle to end of October which will count as 25% of your final grade. This test will be written outside of class time. The exact date, time and location will be announced as soon as this information is made available from the registrar.

#### Policy on Missed Tests:

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This course will not have any make-up tests. Should you miss the term test due to a legitimate reason, you must submit appropriate documentation within one week of your absence. If the reason is medical, an official UTSC medical form should be downloaded from <a href="http://www.utsc.utoronto.ca/~registrar/resources/pdf\_general/UTSCmedicalcertificate.pdf">http://www.utsc.utoronto.ca/~registrar/resources/pdf\_general/UTSCmedicalcertificate.pdf</a> and completed by your doctor. If no acceptable documentation is received, you will receive a grade of zero for that test.

With a validated absence, the value of the missed test will be added to your final exam. Please note that in UTSC Calendar it states: "You cannot petition to withdraw from a course on the grounds that no work was returned to you before the last day to withdraw without academic penalty if this is the result of your having been given an extension to complete your work for reasons relating to you and not the rest of your class."

#### Final Examination – 45% of final grade:

There will be a 3-hour, *cumulative* exam written during the end of semester exam period. The exact date, time and location will be announced as soon as they are available. *Please note that if you miss the Final Exam, you must petition the Registrar's Office to write a make-up exam in the next formal exam period.* Check the UTSC Calendar for instructions and deadlines.

#### Labs:

The laboratory component of CHMA10 is compulsory. In order to pass the course, you MUST also pass the lab component.

#### Lab Schedule:

Laboratory periods are three hours in length and run every other week. Odd numbered practical's (Week 1 students) have their first during week of September 9<sup>th</sup>. Even numbered practical's (Week 2 students) will have their first lab the week of September 16<sup>th</sup>.

#### Lab Manual and Notebook:

A lab manual must be purchased from the UTSC Bookstore before your first lab. You may not use a lab manual from a previous semester: the experiments and course requirements will be different.

**DO NOT** wait to purchase your lab manual as it contains a host of important information:

- Lab Schedules and other important dates
- Late and absence policies
- Rules regarding safety
- Appropriate attire for the labs
- Marking schemes
- Guidelines on how to properly prepare for the lab

The bookstore **DOES NOT** stock enough lab manuals for everyone. If they run out, you **MUST** preorder a copy through the bookstore – this takes time. Failure to adhere to the rules

and policies outlined within the lab manual will adversely affect your lab mark – in some instances the impact will be severe.

In addition, students will be required to purchase their own lab notebook. The book must be hard-cover, permanently bound (not spiral or loose leaf) with the approximate dimensions 8.25" x 10.5" inches. They can be purchased at the UTSC bookstore; however students are free to purchase their books at a merchant of their choice (so long as they meet the above requirements).

#### Lab Safety:

Safety in the laboratory is an extremely important element in the chemistry program at this University. Failure to follow safe practices can cause laboratory accidents which may result in the loss of time, damage to clothing, and other property, and most importantly personal injury. By following suitable precautions, you can anticipate and prevent situations that would otherwise lead to accidents.

You will be required to enroll in the U of T WHMIS online course (EHS005) accessible through the Portal website using your UTORid. Instructions on how to access the course will be posted on the CHMA10 blackboard site. You will be expected to watch the video (approximately 30 minutes long) and take a multiple choice quiz on the material you just learned. You must obtain 80% on the quiz to pass the WHMIS course. You will be required to print off your quiz results and present them to your TA before you will be allowed to enter the lab.

#### **Safety Equipment:**

Students will be required to purchase approved indirect vented chemical splash safety goggles (mandatory), safety glasses (optional) and a lab coat (mandatory) before attending their first lab. These items can be purchased from both the Environmental and Physical Sciences Student Association (EPSA) and the Biology Student Association (BioSA) or the bookstore. All safety eyewear must meet either ANSI Z87+ or CSA Z94.3 Standard for high impact protection (if you see one of those standards stamped on your eyewear somewhere then they meet that particular standard).

## Labs coats must not contain more than 65% polyester material.

Further information regarding appropriate attire please see the guidelines outlined in your lab manual.

Note that students not wearing approved safety gear will not be allowed to participate in the lab.

## **Ancillary Fees**

Students taking CHMA10 will be assessed a \$25.00 ancillary fee which will cover the cost of chemicals, filter paper, Pasteur pipettes and other items consumed over the course of the lab. For more information regarding ancillary fees students are encouraged to visit the following website:

http://www.planningandbudget.utoronto.ca/tuition.htm

#### **Tutorials:**

Tutorials are compulsory and are scheduled within the same time slot as your CHMA10H laboratory but in the alternate week of your assigned laboratory. The duration of the tutorial is one hour. The room assignments for the tutorials ARE NOT THE SAME as your labs. Your Tutorial number (TUTXXXX) is the same as your Practical number (PRAXXXX). Please check the CHMA10H web site (intranet) for a link to the timetable where you can view the times and room assignments of your tutorials. Odd numbered tutorial groups will attend their first tutorial the week of September 16<sup>th</sup>. Even numbered tutorial numbers will attend their first tutorial the week of September 9<sup>th</sup>. The tutorial quizzes count for 5% of your final grade.

#### Additional Resources:

The Chemistry Aid Centre is a student run, drop in help centre where students from introductory general chemistry and organic chemistry courses can go for help with lecture and lab material. The centre is staffed with volunteer tutors, all of whom have done well in the course previously and have been trained on how to effectively help others. Students looking for help with the course can visit the centre in P0104, room 107 starting in the second week of classes. Please visit the Chemistry Aid Centre website at <a href="http://www.utc.utoronto.ca/-chemaid/for-up-to-date-scheduling-information-and-tutor-profiles.">http://www.utc.utoronto.ca/-chemaid/for-up-to-date-scheduling-information-and-tutor-profiles.</a> haddition, a A Facilitated Study Group (FSG) program organized by the Centre for Teaching and Learning is also-available to support this course. The FSG program is designed to enhance the student experience, reduce attrition, and help students succeed in historically difficult courses. Detailed information about FSG is available online (<a href="http://ctl.utsc.utoronto.ca/home/fsg">http://ctl.utsc.utoronto.ca/home/fsg</a>). Please note that tutors in CAC and FSG will NOT give out answers to any graded homework or lab assignments.

## Calculators:

Only non-programmable, non-communicating calculators are allowed in tests and exams for this course (both lecture and lab).

Invigilators have the authority to check calculators during the tests and exams. Students who have illegal calculators confiscated during a test/exam will be supplied with an allowed calculator but an immediate penalty of 10% will be imposed for that test/exam. Students without a calculator will also be allowed to borrow an allowed model, but at the cost 10% off their mark on that test/exam.

**Comment [XZ1]:** Hi Scott, Do we still have this available? Will this be at the same room? Please confirm.

Comment [c2]: As far as I know they are. Since this is a student led group and we apparently get grieved by the union over this group every year, should we think about omitting this section and simply allow the EPSA rep to mention during class?

## Method of Evaluation:

Below is the grading scheme that will be used in this course.

Graded Work	%
Tutorial Quiz	5%
Term Test (NO MAKE-UP)*	25%
Final Exam	45%
Laboratory	25%

<sup>\*</sup>If you miss a test with a legitimate reason supported by acceptable documentation, its value will be added to that of the final.

Note: To pass the course, you MUST pass the laboratory and either the term test or the final exam (and receive a final grade of 50+, of course!).

## Online Grades:

Individual grades will be posted on the Blackboard as they become available. Please check these periodically to make sure that the posted grades match your own records. Any discrepancy should be reported immediately to the instructor or the lab coordinator, as appropriate.

## Lecture Topics:

Below is a brief list of topics that will be covered in this course, along with the corresponding chapters. A more detailed list, with the associated textbook readings and assigned end-of-chapter problems, can be found on Blackboard under the "readings/problems" tab.

#### **Professor Kraatz**

- Review of Chemistry Fundamentals (Chapters 1-4)
- Gases (Chapter 5)
- Thermochemistry (Chapter 6)
- The Quantum–Mechanical Model of the Atom (Chapter 7)
- Periodic Properties of the Elements (Chapter 8)

# **Professor Zhang**

- Chemical Bonding (Chapters 9-10)
- Nuclear Chemistry (Parts of Chapter 19)
- Parts of Chapters 20-22 (If time permits, optional)

# Accessibility:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach us and/or the AccessAbility Services Office as soon as possible. We will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course.

Enquiries are confidential. The UTSC Access Ability Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

# Academic Integrity:

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 academic misconduct are resolved can be found online: <a href="http://www.artsci.utoronto.ca/osai/students">http://www.artsci.utoronto.ca/osai/students</a>

According to Section B of the University of Toronto's Code of Behaviour on Academic Matters <a href="http://www.governingcouncil.utoronto.ca/policies/behaveac.htm">http://www.governingcouncil.utoronto.ca/policies/behaveac.htm</a> which all students are expected to know and respect, it is an offence for students to:

- To use someone else's ideas or words in their own work without acknowledging that
  those ideas/words are not their own with a citation and quotation marks, i.e. to commit
  plagiarism.
- To include false, misleading or concocted citations in their work.
- To obtain unauthorized assistance on any assignment.
- To provide unauthorized assistance to another student. This includes showing another student completed work.
- To submit their own work for credit in more than one course without the permission of the instructor.
- To falsify or alter any documentation required by the University. This includes, but is not limited 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.