



Organic Chemistry I (CHMB41H) - Fall 2012 University of Toronto at Scarborough

Welcome to CHMB41! Organic chemistry is my passion – it's what got me hooked on studying chemistry back when I was in my second year of undergraduate ~~and~~ everyday lives.

Before we get started, please take a few minutes to read through this document. It contains important information which will help ensure you have all the tools you'll need to succeed in this course.

Staff:

Instructor:

Dr. Effie Sauer

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Office Hours: Mondays, Tuesdays and Fridays from 2:00-3:30 pm

Lab Instructor:

Wanda Restivo

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Text:

Organic Chemistry, 6th Ed., by Paula Bruice. This text is available for purchase at the UTSC Bookstore. Also available is the accompanying *Study Guide and Solutions Manual*. This supplementary book is not required reading, however, many students find it useful. If you choose not to buy the study guide and solutions manual, you may use one of the several copies on reserve in the UTSC library.

Molecular models:

You are *strongly encouraged* to purchase a molecular model kit from the UTSC bookstore (Flexible Molecular Model Kit, made by Darling Models). These will become an invaluable tool as the course progresses since several key topics require visualization and manipulations of compounds in three-dimensions. Note that each kit contains enough pieces that it could easily be shared by 2 or 3 students.

Website:

CHMB41 maintains a Blackboard web space which archives a variety of course-related information including: class announcements, lecture slides, questions and answers to the

Students with a validated absence will be permitted to write a make-up exam. Students without a validated absence will receive a grade of zero for the missed test.

Final Examination:

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:

Chemistry is a practical science. You can learn about the theory of a reaction from a textbook, but the techniques required to actually carry out the reaction can really only be learned by doing the experiment yourself. Consequently, the laboratory component of CHMB41 is compulsory, and, *in order to pass the course, you must also pass the lab component.*

Online Safety Quiz:

During the first week of classes, you will be required to complete an online safety quiz. A passing grade on this quiz is required in order to participate in your first lab experiment. Details on the quiz will be posted on Blackboard.

Lab Schedule:

Odd numbered lab sections: Your first lab will be in the week of Sept 17

the week 04-20(f)33()-10(S)-4(e)4(pt)33()

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 me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility 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.

Method of Evaluation:

Graded Work	Value
Mastering Chemistry Assignments*	5%
Laboratory	25%
Term Test,	25%
Final Exam	45%

*Your lowest grade will be dropped.

Note: To pass the course, you must meet the following three criteria: earn a passing grade in the course overall, pass the laboratory and pass *either* the term test or the final exam

Online Grades:

Individual grades will be posted on the intranet 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 (tentative):

We will be covering most of the content from chapters 1-12; however, we will not be strictly adhering to the order presented in the text. Below is a detailed list of topics to be covered (in the approximate order that you will see them) along with the corresponding text book sections. Note that some sections are designated as self-study; this material will not be discussed in detail during lecture.

Part A: Structure

- 1) Organic Molecular structure
 - a) **First year review (self-study: 1.1-1.15)**
 - b) Delocalized electrons (7.1-7.6)
- 2) Introduction to saturated compounds
 - a) Alkanes
 - b) Functional groups: alkyl halides, alcohols, ethers, amines
 - c) **Nomenclature (self-study: 2.0-2.7)**
 - d) Structure, properties, intermolecular forces (2.8-2.9)

2) Introduction

- c) Alkene metathesis (11.6)
- 13) Radical Reactions
- a) Unreactive alkanes (12.1)
 - b) Chlorination and bromination: mechanism, radical stability, product distribution, stereochemistry (12.2-12.5)
 - c) Radical addition to alkenes: mechanism, stereochemistry (12.7-12.8)
 - d) Allylic and benzylic radicals (12.9)
 - e) Application to synthesis (12.10)

Ancillary Fees:

The Department of Physical and Environmental Sciences at UTSC provides state-of-the-art education in chemistry. Chemistry being an experimental science makes learning in a laboratory setting critical. In order to provide the latest technology to enhance the student learning experience, UTSC will be charging ancillary fees for all chemistry courses that have a laboratory component. Those fees are used to recover the cost of materials and services used during the lab and to maintain and upgrade the equipment used by students. To view a complete list of those fees, students are encouraged to visit the following link:

<http://www.planningandbudget.utoronto.ca/Assets/Academic+Operations+Digital+Assets/Planning+!26+Budget/2012-13+Category+5+Ancillary+Fees.pdf>

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.

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

- To use someone else's work or information without their permission

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