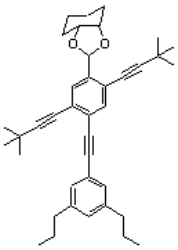
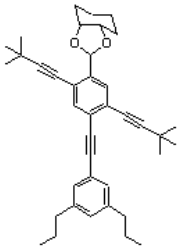


Organic Chemistry I (CHMB41H) – Winter 2013
University of Toronto at Scarborough



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 studies. Organic chemistry can be an exciting subject with applications that are found all around us. Yes, this course is going to require some hard work, but I hope to make it worth your while by exposing you to some of the exciting aspects of this diverse field and connecting the subject to your 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.

Instructor:

Dr. Effie Sauer
SW640
Email: esauer@utsc.utoronto.ca
Phone: 416-287-7209
Office Hours: Tuesdays, Thursdays and Fridays from 2:30-3:30 pm

Email Policy:

Please use a valid "utoronto.ca" account for all CHMB41 correspondence. Emails received 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 (within 36 hours, unless it is a weekend or holiday)

Lecture Schedule:

Tuesday, Thursday and Friday, 1:10-2:00 pm in SW128

Online Lectures:

For those students unable to attend the lectures, or for anyone simply wishing to review the lecture material after class, all CHMB41 lectures will be taped and posted online. The link to these video recordings will be posted on Blackboard. Please note that each lecture will only be available for a period of two weeks after it's been posted. This is to encourage students to stay on top of the material and to avoid anyone falling too far behind.

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 even 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 weekly homework assignments, contact information and links to some useful outside resources. In addition, class emails will regularly be sent via Blackboard. ***In order for you to receive these emails, you must have a valid "utoronto.ca" email account registered with ROSI.***

Discussion Board:

An online discussion board will be maintained through Blackboard. This online space will provide you with a place to post and answer questions related to the course material. You may post anonymously, or as yourself. The forums will be monitored to ensure that all questions are answered accurately. In addition, frequently asked questions (with their answers) may also be posted here so be sure to check in periodically. ***Please note: Posts which contain answers/solutions to weekly homework assignments are not permitted and will be removed promptly.***

Weekly Homework Assignments:

There will be weekly homework assignments to be completed using the online homework system "Mastering Chemistry." ***Access to this online homework system is free.*** Details on how to register will be provided on Blackboard.

Problem sets will be released at the end of each set of lecture notes (approximately once per week) and will be due one week later at 11:59 pm. The assignments will be equally weighted and the scores will be recorded as a percentage. ***Late assignments will not be graded***. In the final calculation for the homework grade, the lowest mark will be dropped.

Term Test:

There will be one, 90 minute term test written outside of class time. The exact date, time, location and material to be tested will be announced as soon as they are available. Any student who misses the mid-term for a legitimate reason ***must submit appropriate documentation within 3 business days of their absence***. If the reason is medical, an official UTSC medical form should be downloaded from the registrar's website and completed by your doctor (http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf).
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; ***in order to pass the course, you must also pass the lab component.***

Lab Schedule:

Labs begin on Friday January 11th. Your exact schedule will depend on your practical section.

Practical	Expt 1	Expt 2	Expt 3	Expt 4	Expt 5	Lab Test
PRA0001 (Tuesdays 9-1)	Jan 15th	Jan 29th	Feb 12th	Mar 5th	Mar 19th	Apr 2nd
PRA0002 (Tuesdays 9-1)	Jan 22nd	Feb 5th	Feb 26th	Mar 12th	Mar 26th	Apr 2nd
PRA0003 (Fridays 9-1)	Jan 11th	Jan 25th	Feb 8th	Mar 1st	Mar 15th	Apr 5th
PRA0004 (Fridays 9-1)	Jan 18th	Feb 1st	Feb 15th	Mar 8th	Mar 22nd	Apr 5th
PRA0005 (Fridays 9-1)	Jan 11th	Jan 25th	Feb 8th	Mar 1st	Mar 15th	Apr 5th
PRA0006 (Fridays 9-1)	Jan 18th	Feb 1st	Feb 15th	Mar 8th	Mar 22nd	Apr 5th

Lab Manual:

There is no official lab manual for this course; rather, handouts will be posted on Blackboard several days before the start of each new lab. Before your first lab, you will need to read over the handouts titled "Introduction to the CHMB41 labs" and "Experiment 1: Separation of a Three-Component Mixture."

Lab Notebook:

You will need a hard-covered, bound (stitched, not spiral bound) notebook with dimensions of at least 20 x 25 cm. This must be brought with you to every lab.

Lab Attire:

Lab coats and safety glasses must be worn at all times in the laboratory. These can be purchased from the UTSC Bookstore. In addition, you must come to the lab wearing shoes which cover your entire foot and long pants/skirt covering all of your legs. *You will not be allowed to work in the laboratory unless you are wearing appropriate attire.*

Absences from the laboratory:

If you need to miss a laboratory period for any valid reason, you must immediately report it to the course instructor. If the reason is medical, an official UTSC medical form should be downloaded from the registrar's website and completed by your doctor (http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf). Students with a validated absence may be permitted to complete a makeup lab, provided that room can be found in another lab section. ***If no valid reason for your absence is provided within 3 business days of the missed lab, a mark of zero will be given for that lab.***

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 Access*Ability* Services Office as soon as possible. I will work with you and Access*Ability* 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.

Method of Evaluation:

Graded Work	Value
Mastering Chemistry Assignments*	5%
Laboratory (see lab handout for breakdown)	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 Blackboard as they become available. Please check these periodically to make sure that the posted grades match your own records. Any discrepancies should be reported immediately to the instructor or lab TA, as appropriate.

Lecture Topics:

You will be learning 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 list of topics to be covered, in the approximate order that you will see them. The corresponding text book sections are provided in brackets.

Part A: Structure

1) Organic molecular structure (Sections 1.0-1.15 and 7.0-7.6)
2) Introduction to saturated compounds (Sections 2.0-2.15)
3) Introduction to unsaturated compounds (Sections 3.0-3.5 and 6.0-6.4)
4) Stereochemistry (Sections 5.0-5.13)

Part B: Reactivity

5) Acid-Base Reactions (Sections 1.16-1.27 and 7.9)
6) Reactions of Alkenes (Sections 3.6-3.9, 4.0-4.14, 5.18-5.20, 7.7 and 7.10)
7) Reactions of Dienes (Sections 7.8 and 7.10-7.12)
8) Reactions of Alkynes (Sections 6.5-6.10)
9) Substitution Reactions (Sections 6.11 and 8.0-8.10)
10) Elimination Reactions (Sections 9.0-9.6 and 9.8-9.10)
11) Reactions of Alcohols, Ethers and Epoxides (Sections 10.0-10.7)
12) Organometallic Compounds (Sections 11.0-11.6)
13) Radical Reactions of alkanes (Sections 12.0-12.5)

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 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.