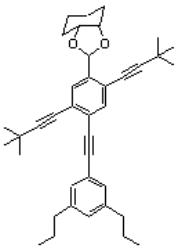
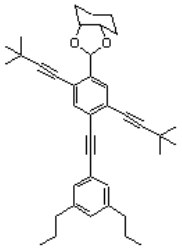


Organic Chemistry II (CHMB42H) – Winter 2018
University of Toronto at Scarborough



Welcome to CHMB42! 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 (Labs and Lecture):

Dr. Effie Sauer
EV554
Email: esauer@utsc.utoronto.ca
Office Hours: Mondays 11:30 am – 1:00 pm AND Wednesdays 2:00 pm-3:30 pm

Email Policy:

Please use a valid "utoronto.ca" account for all CHMB42 correspondence. Emails received from other accounts may be filtered out as spam and not received. When composing your email, please use professional language. Sign the email with your first and last name, as well as your student ID. Messages will be answered within 36 hours, unless it is a weekend or holiday.

Lecture Schedule:

Mondays 10:10-11:00 am, HW216
Thursdays 9:10-10:00 am, SW319
Fridays 2:10-3:00 am, HW216

Online Lectures (Web Option):

The LEC60 section of this course is online only. Lectures will be recorded and posted for viewing through Blackboard. If you are enrolled in the LEC60 section but wish to attend the live lecture, you may – **provided that there is seating available**. Priority will be given to those students officially enrolled in LEC01.

Tutorial:

There is an ***optional*** tutorial every Monday from 3-5 pm (SW143). The format of the tutorial will alternate between weeks as follows:

- Week 1: Problem solving practice
- Week 2: Lab seminar, followed by problem solving practice

The lab seminar portion of the tutorials will be filmed and posted online. The problem solving sessions will not be recorded; however, questions and answers will be posted online following each session.

Text:

Organic Chemistry: Mechanistic Patterns, by William Ogilvie et al. This text is available for purchase at the UTSC Bookstore both with and without the student's solutions manual. Note: this is NOT the text used in CHMB41 last term.

Website:

CHMB42 maintains a Blackboard web space which archives a variety of course-related information including: class announcements, lecture slides, assigned textbook readings and problems, contact information for lab TAs, and links to some useful outside resources. In addition, class emails will periodically be sent via Blackboard. ***In order for you to receive these emails, you must have a valid "utoronto.ca" email account registered with ACORN.***

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.

Lecture Topics (tentative):

We will be exploring content from the following chapters, in the order presented below. The number in brackets after each chapter corresponds to the number of lectures we'll devote to that chapter.

- Chapter 5: Organic Reaction Mechanisms (2)
- Chapter 9: Conjugation and Aromaticity (2)
- Chapter 10: Electrophilic Aromatic Substitution and Directed *Ortho* Metalation (5)
- Chapter 13: Structure Determination I: NMR Spectroscopy (5)
- Chapter 14: Structure Determination II: MS and IR (2)
- Chapter 7: Pi Bonds as Electrophiles (4)
- Chapter 15: Pi Bond Electrophiles Connected to Leaving Groups (5)
- Chapter 16: Pi Bond with Hidden Leaving Groups (3)
- Chapter 17: Carbonyl-Based Nucleophiles (6)

Method of Evaluation:

Graded Work	Value
Term Test 1	15%
Term Test 2	20%
Laboratory	25%
Course engagement	5%
Final exam	35%
TOTAL	100%

Note: To pass the course, you must meet **ALL** of the following criteria: 1) earn a passing grade in the course overall, 2) pass the laboratory, and 3) pass *either* one of the term tests or the final exam.

Term Tests:

There will be two, 60 minute term tests written outside of class time. The exact date, time, location and material to be tested will be announced as soon as the tests are scheduled by the registrar's office. Note that the second term test will be cumulative and include material from the first term test.

Final Examination:

There will be a 3-hour, ***cumulative*** exam written during the end of semester exam period. The exam will cover ***both lab and lecture material***. The exact date, time and location will be announced as soon as they are available.

Course Engagement Grade:

This course has a 5% course engagement grade which can be earned in one of four different ways. The four methods of earning course engagement grades are:

- iClicker questions (multiple choice polling questions presented in lecture)
    - Graded for both number of questions answered and percentage of correct answers.
- Textbook readings and self-assessment questions (tracked online through Mobius platform)
    - Graded for both completeness of readings and correctness of graded answers.
- Literature assignments (three, one-page assignments connecting course material to the world of chemistry research)
    - 1st assignment worth 1%
    - 2nd and 3rd assignments worth 2% each
- Active responder on discussion board
    - Regularly answering content questions posted by other students (graded for frequency and correctness of responses)

Further details on the four options and the specifics of how they will be graded can be found on Blackboard.

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 CHMB42 is compulsory, and, ***in order to pass the course, you must also pass the lab component.***

Lab Schedule:

Odd numbered lab sections: Your first lab will be in the week of Jan. 15th
Even numbered lab sections: Your first lab will be in the week of Jan. 22nd

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 as the experiments and course requirements will be different. Please note that the bookstore does not stock enough lab manuals for everyone since many students are still "shopping" for their courses. If they run out, you must preorder a copy with the bookstore – a process which can take up to 5 business days.

Students also need a 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. These 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). If you have your notebook from CHMB41, you are welcome to reuse it provided at least half of the pages are still blank.

Personal Protective Equipment

Lab coats and safety glasses must be worn at all times in the laboratory – even when you are not performing an experiment. In addition, your legs and feet must be entirely covered. Safety glasses can be worn before the lab begins (i.e. during the quiz and lab prep talk); however, once the experiment begins, students will be required to wear indirect vented chemical splash goggles. If you don't already have approved lab goggles or a lab coat, you may purchase these items from the UTSC bookstore, or from the Environmental and Physical Sciences Student Association (EPSA).

Online WHMIS Videos and Safety Quiz:

Before your first experiment, you will be required to watch a series of WHMIS laboratory safety videos and complete an online safety quiz. These are found on your Blackboard homepage and listed as: Workplace Hazardous Materials Information System. Follow the instructions presented there. You must achieve a score of 80% or better on the quiz to be allowed to enter the lab. Once you have completed the quiz, print out a hard copy of your results showing your name and quiz score. **You must give this sheet to your TA as you enter the lab on your first lab day.** Showing it to the TA on your phone is not adequate; a paper copy is required. NOTE: The date on the quiz must be from this term; even if you've take the quiz in previous semester's for other courses, it must be repeated for the current semester.

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. These 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. For more information regarding ancillary fees, students are encouraged to visit the following website: http://www.planningandbudget.utoronto.ca/tuition.htm

Lab Rules:

- *Be punctual:* There is a quiz at the beginning of every experiment, including the first one. Quizzes will begin promptly at 10 minutes past the hour. Students arriving more than 30 minutes late to a lab (9:40 am for morning labs; 1:40 pm for afternoon labs) will not be allowed to carry out the experiment. In such cases, the experiment will be treated as a missed lab and the above policy on missed labs will apply.
- *Be prepared:* Each student is expected to have good knowledge of the assigned experiment before entering the laboratory. TAs will be checking your notebook before entrance to the lab. If they feel you are underprepared, you will be denied entrance to the lab and will receive a grade of zero for the experiment.
- *Be safe:* Lab coats and safety glasses must be worn at all times in the laboratory; legs and feet must be entirely covered. During the lab experiment, indirect vented chemical

splash goggles must be worn. Students who fail to follow these safety requirements will be removed from the lab.

Policy on Missed Tests and Labs:

Should you miss a lab or term test due to a legitimate reason, you must contact Dr. Sauer by email ***within 24 hours***, and submit appropriate documentation ***within 5 business* days** of your absence. If the reason for your absence is medical, an official UTSC medical note must be downloaded from the UTSC registrar's website and completed by your doctor (http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf).
Note that the completed note must meet the following criteria:

- Your physician must have examined you during the period of illness/injury (not before or after the fact).
- The missed test or lab period must fall within the indicated start date and anticipated end date.
- The physician must rank your illness as either moderate, serious or severe; illnesses deemed mild or negligible will not be considered valid excuses. This is a departmental policy.

If no acceptable documentation is received within 5 business days of your absence, you will receive a grade of zero for the missed lab and/or test.

Once your absence has been validated, accommodations will be made for your missing grades. In the case of a missed term test, the missing grade will be equally distributed over the remaining term test and final exam. If a lab was missed, the grades for that lab will be equally distributed over the other lab experiments. ***Note that students will not be allowed to pass the course if they miss more than two lab experiments – regardless of whether the reasons for their absences were valid.***

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.

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.