Winter 2018 | **CHM 136 – Introductory Organic Chemistry I**

E-MAIL: chm136h@chem.utoronto.ca (for questions regarding course administration)

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LAB INSTRUCTORS	Professor C. Kutas-Chisu (Wed. and Thurs. sections) Lash Miller Laboratories, Rm. LM 217a/LM 221 ckutas@chem.utoronto.ca	416-978-8796
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COURSE ADMINISTRATOR	Mr. K. Chen Lash Miller Laboratories, Rm. LM 219 chm136h@chem.utoronto.ca Office hours: MTWRF 2:00 – 4:30 p.m.	416-978-3604

On behalf of the Department of Chemistry, we would like to welcome you to your first-year course in introductory organic chemistry. This outline is designed to provide you with information about the course, to let you know what we intend to do and to emphasize what we expect from you.

The two chemistry courses CHM 135H (Chemistry: Physical Principles) and CHM 136H (Introductory Organic Chemistry I) are designed to jointly provide a general introduction to chemistry for students who intend to follow a science program, primarily in the Life or Health Sciences. They are also the recommended courses for those applying for entry into professional programs. CHM 135H and CHM 136H are also acceptable in the Chemistry specialist, major and minor programs of study, although CHM 151Y (Chemistry: The Molecular Science) is the recommended course for entry into these programs.

CLASS MEETINGS	L0101	Monday, Wednesday, Friday	12:00pm - 1:00pm	ES 1050
	L0201	Tuesday, Thursday, Friday	9:00am - 10:00am	MS 2158

COURSE OVERVIEW

CHM 136H provides an introduction to the fundamental principles of structure, bonding and reactivity of organic molecules. In this course, a working knowledge of chemistry at the Grade 12 level will be assumed. We trust that you will find this course both interesting and challenging. We believe that CHM 136H, along with CHM 135H, will prepare you well for other chemistry and life-science courses in later years. If these are to be your only courses in chemistry, you will have gained some understanding of the breadth of the subject and of its importance in a wide variety of other areas of science.

TEXTBOOK FOR CHM136H

The required textbook for CHM 136H is "Organic Chemistry, 9th Edition" by John McMurry (Nelson, 2015). There is also a supplement to this text: Study Guide and Solutions Manual by Susan McMurry that contains complete solutions to the problems found in the textbook. While you are not required to purchase the supplement, we highly recommend you use the Solutions Manual with the textbook. Please note that previous editions of the course textbook (e.g. 8th, 7th, 6th) are NOT supported in CHM 136H.

The purchase of a molecular model kit is also strongly recommended. All of these items are available from the University of Toronto Textbook Store at 214 College Street.

ARRANGEMENTS FOR THE COURSE

LECTURES

Brief course lecture notes will be available on the CHM 136H course website on Blackboard ahead of each class. *These notes do not represent all the concepts discussed in lecture and as such you should attend all CHM 136H classes* since it is here that fundamental course content will be presented and elucidated. **Be prepared to make notes in lecture on the material discussed as this is a key component of active learning.** Since the capacity of the lecture theatre must not be exceeded due to fire regulations, you must attend only your **timetabled** lecture section. Proof of your registration in your timetabled lecture section may be required and only those students registered for the lecture section will be permitted to remain in class.

TUTORIALS

You chose a weekly tutorial time on ROSI/ACORN when you enrolled in CHM 136H. On the basis of your time selection, you will be assigned to a tutorial group by the Department of Chemistry. Tutorials begin the week of **Monday, January 15**. No later than this date, your tutorial group number as well as the day, time and location of your scheduled tutorial class meeting will be posted under the 'My Grades' link on the CHM136 course website as well as on the bulletin board outside LM 217. Make a note of this information - you will need it for future reference.

Throughout the term, questions that will help you to assess and improve your understanding of the course material will be posted on the course web site for you to work through. The majority of these questions will be selected from the end of each chapter of the textbook. Do the questions for your next weekly tutorial class. At that class, your teaching assistant (TA) will answer any questions that you may have concerning the assigned exercises and assist you in understanding the important concepts of the course material. At the tutorial classes, you will write 10-minute quizzes that count for credit towards your final mark. **You must attend your assigned tutorial group to receive credit for your quizzes.** The quiz questions will be very closely based upon the assigned questions of that week and the previous week.

LABORATORIES

You will attend your first laboratory class on the date indicated below, according to the P-section you chose when you registered for CHM 136H on ROSI:

for students in	labs begin on
P0101	Monday January 15 2:10 - 5:00 p.m.
P0201	Tuesday January 16 2:10 - 5:00 p.m.
P0301	Wednesday January 17 2:10 - 5:00 p.m.
P0401	Thursday January 18 2:10 - 5:00 p.m.

for students in	labs begin on
P0102	Monday January 22 2:10 - 5:00 p.m.
P0202	Tuesday January 23 2:10 - 5:00 p.m.
P0302	Wednesday January 24 2:10 - 5:00 p.m.
P0402	Thursday January 25 2:10 - 5:00 p.m.

No later than 12:00pm on Monday, January 15, your P-section number, demonstrator group number and lab station number will be posted under the 'My Grades' link on the CHM136 course website as well as on the bulletin board outside LM 217. Make a note of this information - you will need it for future reference. At 2:00 p.m. on the afternoon of your scheduled P-section start date, please attend your first lab class to perform the Safety and Solubility lab.

Each student must purchase a copy of the CHM 136H Lab Manual (**2018 Winter Edition**). It is available for purchase ONLY from the Chem Club office (Lash Miller Laboratories, Room LM 204) during the hours posted outside their office. You will need the lab manual to prepare for the first lab class. *You cannot perform experiments without the **2018 Winter** CHM 136H Lab Manual.*

A reminder: all students will perform the Safety and Solubility lab at the first lab class. *Please arrive prepared!*

In preparing for your first lab, please consult the information posted under the "Laboratories" link on the CHM 136H Blackboard course website. *As part of your preparation, be sure to read* the "Policy Regarding Laboratory Academic Discipline" on page policy-1 of the CHM 136H Lab Manual.

Remember to bring the following items to your first laboratory class:

- CHM 136H Lab Manual (2018 Winter edition),
- a laboratory notebook (hard cover; ruled sheets stitched into binding, 22 x 28 cm)*,
- indirectly vented chemical splash safety goggles*,
- a lab coat*,
- nitrile rubber gloves*.

*The laboratory coat, lab notebook, safety goggles, gloves and Lab Manual may be purchased from a variety of sources, including the Chemistry Club office; a schedule of sales hours is posted on the office door and on the course website. Note that the office is open only during the first few weeks of the term.

It is essential that you buy the Lab Manual well in advance of your first chemistry lab and that you properly prepare to perform the Solubility lab. Please contact the appropriate laboratory coordinator if you have any questions about the academic material covered in the laboratories.

General Assistance

For assistance with administrative issues (e.g. lab/tutorial scheduling, test conflicts, etc.), please contact the course administrator, Mr. K. Chen, during his office hours. For information concerning course material, please contact the appropriate instructor. They have set aside specific times when they are available to discuss the course material with you. These "office hours" will be announced in lectures and posted on the CHM 136H Blackboard course website. Your tutorial teaching assistants, the laboratory instructor and laboratory demonstrators will also help as much as they can. They do have other things to do, however, and cannot be available at all times. Try to be reasonable, make appointments (and keep them) and you will find that extra help is there. You can contact your instructor via email at the address provided on the first page. If you email them, please remember to:

1. address your enquiry only to one instructor, making sure to send it from your UTORid email address.
2. include your full name and student number;
3. use common sense and courtesy in constructing your email, keeping the language and tenor of your email appropriately professional;
4. use proper sentences to help ensure that your email content is unambiguous;

Please keep expectations concerning a reply to your enquiry reasonable and allow two school days for a reply. It is not recommended to ask course content questions by email – organic chemistry is much better discussed in person!

Absences

If you miss a test or a significant period of class work through illness or a related reason, you should request consideration by submitting a completed University of Toronto Verification of Student Illness or Injury Form which is available at the Faculty of Arts and Science web site:

www.illnessverification.utoronto.ca

The document must be presented within one week of the date of absence. Only serious illness (or equivalent reasons) will be accepted as justification for absence (note: the U of T Verification of Student Illness or Injury Form, filled out by your doctor, stating that you saw him/her on a given day is not adequate. Your doctor must certify that you were too sick to attend the test, etc.). The form of consideration extended for a particular item of missed term work will be explained to you when you submit the form; however, no make-up tests can be offered. For more information regarding missed term work, consult the 2017-18 Arts and Science Calendar. If you miss a laboratory, follow the procedure outlined in the CHM 136H Lab Manual.

Accessibility

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:

accessibility.services@utoronto.ca or http://www.studentlife.utoronto.ca/as

ANNOUNCEMENTS

Official announcements regarding test locations, material covered for each test and other important announcements will be posted on the CHM 136H Blackboard course website and also on the wall outside LM 217. **It is your responsibility to check these postings regularly for important announcements – it is good university practice to check Blackboard daily!**

TEST AND EXAM SCHEDULE

Two term tests will be held according to the schedule below. The test dates may be changed. Any change in the schedule will be announced in the lectures, on the CHM 136H Blackboard course website and posted outside LM 217. The final examination will cover the entire course work.

First Term Test:	Thursday, February 15th, 2018	5:45 p.m. – 6:45 p.m.
Second Term Test:	Thursday, March 22rd, 2018	6:00 p.m. – 7:00 p.m.
Final Examination:	To be scheduled during the examination period, April 9 – 30, 2018.	
	The actual date of the exam will be set by the Faculty of Arts & Science and could occur on the last date mentioned.	

MARKING SCHEME

	A		B
Laboratory‡	20%		20%
Best three of four tutorial quizzes	5%		5%
Two term tests	40%	**or**	25%
Final examination	35%		50%
Final mark	**100%**		**100%**

‡ A bonus of 2 marks will be added to the lab mark of every student who participates in the on-line evaluation of BOTH the lab and the tutorial TAs. Details will be announced near the end of session.

All assigned marks will be scaled to fit into this scheme.

PLAGIARISM

Plagiarism, in any form, will not be tolerated in CHM 136. Please refer to the Department of Chemistry's policy on plagiarism at http://www.chem.utoronto.ca/undergraduate/plagiarism.htm for more information. Plagiarism is a serious academic offence and it's important that you are aware as to what activities constitute plagiarism! You can learn more about this at the website of the Office of Student Academic Integrity: http://www.artsci.utoronto.ca/osai/ .

COURSE OUTLINE

The following outline gives a brief overview of the textbook material which will be covered*:

Chapter	Topic	Approx. No. of Lecture Hrs.
1	Structure and Bonding	3
2	Polar Covalent Bonds; Acids and Bases	3
3	Organic Compounds: Alkanes and Their Stereochemistry	3
4	Organic Compounds: Cycloalkanes and Their Stereochemistry	3
5	Stereochemistry at Tetrahedral Centres	3
6	An Overview of Organic Reactions	3
7	Alkenes: Structure and Reactivity	3
8	Alkenes: Reactions and Synthesis	3
10	Organohalides	2
11	Reactions of Alkyl Halides: Nucleophilic Substitutions and Eliminations	4
15	Benzene and Aromaticity	2
17/12	Alcohols; IR Spectroscopy	3

*Please note that you are responsible for the material covered in the textbook as well as additional material presented in lecture and the accompanying Blackboard web notes.

CHM136H COURSE WEBSITE

The course website will serve as the primary source for updated information that every CHM 136H student requires. Some course lecture notes, tutorial assignments, test information, and other course material will be posted frequently on the website as the course progresses. **Visit the course website on a daily basis!**

CHM 136H uses the Blackboard LMS for its course website. To access the CHM 136H site, or other Blackboard-based course sites, go to the UofT portal at

http://portal.utoronto.ca

and login using your UTORid and password. Once you have logged in, you'll find, under '*My Courses*', the link to the CHM 136H course website as well as to your other course sites that use Blackboard.