

**ORGANIC CHEMISTRY I
CHMB41H3
LECTURE OUTLINE**

This document contains important course information and should be kept in a safe place where you can refer to it throughout the semester.

Welcome to CHMB41HS: Organic Chemistry I:

Welcome to CHMB41HS: Organic Chemistry I. Organic Chemistry is an exciting subject with applications that are found all around us. 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 relating the subject to your everyday lives. Please take a

To login, go to: <https://portal.utoronto.ca/webapps/portal/frameset.jsp>

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 by me (and/or a teaching assistant) to ensure that all questions are answered accurately. The times during which the posts will be checked will be announced in class during the semester. 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.

Learning Outcomes for Course: By the end of this course, students will be able to:

- a) Identify and name major classes of organic compounds
- b) Describe and distinguish between different types of bonding and their effect on physical properties of molecules
- c) Give examples of different types of nucleophiles and electrophiles and show electron movement in reactions using curved arrows
- d) Predict major and minor products of reactions based on reaction data and explain why/how they are formed
- e) Compare and contrast thermodynamic versus kinetic products and conditions for formation of each
- f) Classify reactions as substitution, elimination, addition, etc and choose/distinguish between factors and conditions that favor one type versus others
- g) Convert 2-dimensional chiral structures into 3-dimensions and determine *R* or *S* stereochemistry
- h) Distinguish between enantiomers, diastereomers, meso and other forms of isomers
- i) Anticipate and validate the stereochemical outcome of reactions involving stereocenters
- j) Propose and design syntheses of given compounds using retrosynthetic analysis

Textbook: Top Hat Interactive Textbook

Chapters: 1-13

In-chapter questions and the readings in the chapter will be assigned for participation and correctness and will be worth **3%** of your overall course grade.

Recommended: Molecular Models

You are *strongly encouraged* to purchase a molecular model kit from the UTSC bookstore or other bookstores such as Indigo or Chapters. These will become an invaluable tool as the course progresses since several key topics require visualization and manipulations of compounds in three-dimensions.

In class Participation:

We will be using the Top Hat (www.tophat.com <<http://www.tophat.com/>>) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. Participation marks will be awarded for answering questions in class. A maximum of **3%** participation mark can be obtained based on how many lectures you participate in.

Online Homework:

The online homework system is part of the Tophat platform. I will assign the homework questions at the end of each chapter as we progress through the text and due dates will be announced on Blackboard and the Tophat platform. There will also be separate questions assigned for reactions and mechanisms starting from chapter 7. These will be for extra practice and directly related to test and exam questions; thus, the more you do, the better prepared you will be for your midterms and final exam.

Laboratory Schedule:

Odd numbered labs Sections **PRA0001, PRA0003** etc. (**week 1 students**) begin labs week of **January 15th, 2018**, with the **FIRST** week 1 lab being held on **TUESDAY JAN 16th**. **Even numbered** labs Sections **PRA0002, PRA0004** etc. (**week 2 students**) begin labs week of **January 22nd, 2018**, with the **FIRST** week 2 lab being held **TUESDAY JAN 23rd**.

Extra Resources:

a)

- * there may be a makeup for term test with appropriate documentation IF number of students necessitates- otherwise the percentage will be added to the final exam
- ** lab component must be passed in order to pass course

NOTE: In order to pass the course, you MUST pass the laboratory component and at least one of the midterm and final exam.

Online Grades:

Individual grades will be posted on Blackboard as they become available. Please check these periodically to

are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287 3560 or ability@utsc.utoronto.ca. The sooner you let us know your needs, the