

CHMB41H3, ORGANIC CHEMISTRY I, 2006 Spring

Instructor & Course Co-ordinator: J.P.Potter (S-633A). phone:416-287-7222. e-mail: potter@utsc.utoronto.ca. Office hours: W1-2 p.m. F 11-12 noon. Other times by appointment.

Required Materials: Textbook: "Organic Chemistry" 4th ed., by Paula Yurkanis Bruice, Prentice - Hall Inc.,2003. A package of the text with a Study Guide & Solutions manual, and an ACE access code for the online quizzes, is available, at the Bookstore. Media links are available at: <http://www.prenhall.com/bruice/>.

Lectures: Tuesday & Friday at 1 p.m. in MW170.

Lecture Schedule:

Week of	Chapter	Subject
Jan. 9	1	Introduction:Electronic Structure, Bonding, Acids & Bases
Jan. 16	1,2	Nomenclature, Physical Properties, Structure Representation
Jan. 23	2,3	Alkene Nomenclature, Structure, Reactivity. Thermodynamics & Kinetics
Jan. 30	3,4	Hydrocarbons, Reactions of Alkenes.
Feb. 6	4,5	Stereochemistry: Arrangement of Atoms in Space; Addition reactions
Feb.13	5,6	Stereochemistry: Arrangement of Atoms in space
Feb. 20		READING WEEK
Feb. 27	6,7	Alkyne Reactions;, Resonance & Electron delocalization
Term Test - 100 mins. Date & material to be confirmed. Tentatively, March 1st - , 6th 2006. Probably on Chapters 1-6		
Mar. 6	8,9	Reactions of Dienes; Alkanes - Radical Reactions
Mar. 13	9,10	Substitution Reactions of Alkyl Halides
Mar. 20	10,11	Substitution Reactions of Alkyl Halides; Elimination Reactions of Alkyl Halides; Competition.
Mar. 27	11,12	Elimination Reactions of Alkyl Halides; Competition.
Apr. 3	12	Other Substitutions & Elimination Reactions; Organometallics

Spring Exam Period, Apr.17-May 2, 2006. Three hour term test, Chapters 1 - 12. ANY TRIPS SHOULD NOT BE BOOKED TO LEAVE UNTIL AFTER THIS TIME!

No calculators, models, pagers, cell phones or other aids will be allowed during any lecture test or exam, unless announced previously. Approved calculators (Texas Instruments, TI30; TI32; TI-34; SharpEL-531; EL-509; EL-530; Casio fx-65; fx-250; fx-260; fx-280.) may be allowed during laboratory quizzes and tests.

Persons who miss a test or exam, or lab are expected to contact the Instructor immediately. Documentation, for approval, must be given within one week (e.g. Doctor's note - which should say that you were seen on the day in question, and that in the Doctor's opinion you were unable to write a test that day) A suitable blank note is given on the intranet, as well as linked to the course web site. If the documentation is insufficient, you may be required to obtain further, signed, paperwork. Those presenting a valid, documented reason for absence, in writing, within this time frame, will be allowed to be excused OR to write a make-up test, AT THE INSTRUCTOR'S DISCRETION. Any make-up test will be

scheduled by the Instructor, and will often be on the second Tuesday or Wednesday following the original test.

Marked Term Tests - an announcement will be made, in lecture and/or on the web site or intranet, when tests are marked. It is your responsibility to pick up your marked test from Janet Potter during announced times (generally lab times). **Re-marking claims will only be considered for one week after the announcement has been made.** The whole paper will be re-marked. Any re-marking claims must be accompanied by a written statement, outlining the difficulty, and presenting data (referenced, if necessary) to support your claim for extra marks.

CHMB41H3 Marking Scheme:

One term test	25%
Online quizzes (5)	5%
Final Exam	45%
Laboratory mark (breakdown on 1st page of lab manual)	25%
	100%

The due dates for the two online tutorials (learning how to use the MarvinSketch program) and the 5 quizzes, will be given on the intranet, and on the ACE web site. If you had previously purchased the text package in Sept. 2005, or an ACE access code, it will be re-usable. If you did not, then you will need to purchase an ACE access code separately from the bookstore.

Campus Computer Network

If you were a student at the College last year, then you already have an account. If not, sign up for a UTSC account at having your Tcard ready. Various software, e-mail and printing facilities, as well as access to the internet and intranet are available.

The course web site is at: <http://www.utsc.utoronto.ca/~potter/CHMB41w/Index.htm>. It includes only general lecture and lab reference material. More detailed material, including some lecture material and answers to lab problems, can be accessed on the intranet site from the UTSC Home page.

Lab Information & Manuals

The Lab Manual material is being made available on the Intranet this term. You should download:

1. The Introduction to the manual, which includes much relevant information for the labs.
2. The Appendix, which includes general theory and information on various techniques.
3. The five experiments that will be carried out during the term.
4. The schedule for the experiments.

If you have taken the course previously, the Introduction, and Appendix, will already be available to you in your old manual, and you do not need to re-print it. Your lab demonstrator will check that you have printed all of the available material, and there will be lab quizzes that require knowledge from all sections of the downloaded materials.

Bring to your first lab: a lab coat; chemical safety glasses; a hardcover notebook (\$1 store?); a blue or black non-erasable pen. Leave a few pages in the notebook for an index, before beginning an Introduction to the first experiment on a right-hand page. The TA's will go over the lab manual material on notebooks, plus distillation and its results, in the lab, but you are required to read and think ahead on all lab materials.

Suggested Problems From Organic Chemistry, 4th Ed. Bruice, 2003. (Prentice-Hall)

First thirteen lectures: NO SECTIONS OF TEXT ARE OMITTED IN CHAPTERS 1-3.

Chapter	Assigned Problems, 4 th ed.
1	50a,e,g;51a,b,g;52b;53a,d,f;54c.f;56a,e;57a->f;58b,c;59i,3,5;60a,b,c;62;63a->d;66,69
2	40c,k,m;41d,f,g,j;42a;43;44a,b,c;46b.d,h;47;52;53;54a,d,e;56a,b,d,e;57;63
3	27b,c;28a,b;29a,c;30a,b;31a->f;32;34;35;36;37;38c,d,e,i;39
4	34;35;36;37;38;40;41;43;44;45;46;47;50;53 OMIT SECTION 4.15
5	53;55;56;57a,c,d,e,h,o;58;60b,d,e;61;64;66;69g;70;81;82
6	22;25;26;30;31;32;34;36;37a,b,e;39;40a,d;42

Lectures 14- 24:

Chapter	Assigned Problems, 4 th ed
7	18, 21, 22(1->6), 23, 24,25,26,27,28,29,30,31,33,35. OMIT SECTION 7.11
8	25-32,34,37,41,42,47,53. OMIT SECTION 8.9-8.13
9	15-18, 20,22,24,25.
10	32-42, 44,45,50,54.
11	29-34, 37,38, 43,44a,b, 48, 49.
12	38-42,45,48, 53, 56, 59,60, 65, 67. .OMIT: Section 12.8 (Arene Oxides); Section 12.9 (Crown Ethers).

The above problems are the minimum number suggested for you to try. You should always attempt as many problems as possible, as Organic Chemistry is mainly learned by "doing". The best way to do this is to keep up with the lecture material as much as possible, getting help with any problems as soon as you can. Students will likely not be successful in the course if they put off doing problems until immediately before an exam. ACE online quizzes should help you develop the thought processes for problem solving, and should be done by everyone.