

CHMB41H3, ORGANIC CHEMISTRY I, 2005F

Lecturers: L01:J.P.Potter (S-649B). phone:416-287-7222. e-mail: potter@utsc.utoronto.ca.

Office hours: W1-2 p.m., Th 11-12 p.m Other times by appointment.

Course Co-ordination, Lecture, Labs & Marks: J.P.Potter, (Room S-649B).

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

Aclicker system is also going to be used in the ARC, for spontaneous feedback of questions asked in lecture. These are on sale at the bookstore (\$18.75) and can be used for all courses, and re-sold to the bookstore.

Lectures: L01-W8 a.m.; F8 a.m. in ACC223.

Lecture Schedule:

Week of	Chapter	Subject
Sept. 12	1	Introduction:Electronic Structure, Bonding, Acids & Bases
Sept. 19	1,2	Nomenclature, Physical Properties, Structure Representation
Sept. 26	2,3	Alkene Nomenclature, Structure, Reactivity. Thermodynamics & Kinetics
Oct. 3	3,4	Hydrocarbons, Reactions of Alkenes.
Oct. 10	4,5	Stereochemistry: Arrangement of Atoms in Space; Addition reactions
Oct. 17	5,6	Stereochemistry: Arrangement of Atoms in space
Oct. 24	6,7	Alkyne Reactions;, Resonance & Electron delocalization

Term Test - 100 mins. Date & material to be confirmed. Tentatively, Friday,28th, Wed 26th or Sat 29th October. Probably on Chapters 1-6

Oct. 31	8,9	Reactions of Dienes; Alkanes - Radical Reactions
Nov. 7	9,10	Substitution Reactions of Alkyl Halides
Nov. 14	10,11	Substitution Reactions of Alkyl Halides; Elimination Reactions of Alkyl Halides; Competition.
Nov. 21	11,12	Elimination Reactions of Alkyl Halides; Competition.
Nov. 28	12	Other Substitutions & Elimination Reactions; Organometallics

Xmas Exam Period, Dec 10-21, 2005. 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); TI34; Sharp EL-531; EL-509;(EL-530); Casio fx-65;fx-250; fx-260; (fx-280).) may be allowed during laboratory quizzes and tests. Models in (parenthesis) are no longer available, but may still be used.

Persons who miss a test or exam 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 in your lab manual, 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 normally be on the second Wednesday after 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. **Re-marking claims will only be considered for one week after the announcement has been made.** The whole paper will be re-marked. Claims must be accompanied by a written statement, outlining the difficulty and presenting data (referenced, if necessary) to support your claim for extra marks. You may pick up your marked test from Janet Potter during any lab practical times (do NOT wait until your own).

CHMB41H3 Marking Scheme:

One term test (Fall), % each	25%
Final December Exam	45%
ACE online quizzes (5 + 2 tutorials to be completed)	5%
Laboratory mark (breakdown on 1st page of lab manual)	<u>25%</u>
	100%

ACE online quizzes are new this year. Deadlines for submission of these online quizzes will be given on the intranet, and on the quiz assignments themselves. There are two tutorials to be done to learn how to sign in, and how to use the MarvinSketch functions to draw chemical structures, which you should complete at your earliest opportunity. Each question can be attempted up to 20 times! Keep up with the lecture material for maximum benefit!

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 <http://www.utsc.utoronto.ca/~accounts/newaccount.cgi>, 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 notes, answers to lab problems, and some tutorial material, can be accessed on the intranet site from the UTSC Home page.

Lab Manuals (\$10) may be purchased from Pat Woodcock in S644, whenever she is available (lunch 1-2 p.m.). Everyone **MUST** purchase their own manual. Read through the Introduction, as well as prepare for the first practical session, on Distillation.

Bring to your first lab: a lab coat and safety glasses (sold by ABCS during the first 2 weeks of term only, if you do not already own them); a hardcover notebook (\$1 store?); a blue or black, non-erasable ink pen. Leave a few pages at the beginning of your lab notebook blank, for an index. Date and begin an Introduction to the experiment on a right-hand page. Your demonstrator will be giving you a tutorial on distillation, but you should think for yourself about the expectations for the graphs, and how to calculate your results, when you have them.

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

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

FIRST TERM TEST: TO BE ANNOUNCED. PROBABLY CHAPTERS 1-6, ONLY.

ALL WILL BE CONFIRMED ONCE DATE IS KNOWN.

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
5	53;55;56;57a,c,d,e,h,o;58;60b,d,e;61;64;66;69g;70;81;82 OMIT SECTION 5.17
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, 33,34,37,41,42,47,53. 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. Doing the ACE online quizzes should give you great experience for tests and exams!