Instructor: Dr. H. Taube

Office: Chem Bldg E5-33J

Phone: 492-5239

Lecture Hours: T, R 12:30 - 13:50 h;

Office Hours: M, W, F 13:00 - 14:00 h; T, R 14:00 - 15:00 h; by appointment or

take your chances and drop in

Email: htaube@ualberta.ca

Course Mark Breakdown: Labs (pass mark 60%) 25 %

Quiz 11 % MidTerm Exam 25% Final Exam 39 %

A letter grade will be assigned based on your course average,

using the attached approximate University Guidelines.

Code of Student Behavior: No misrepresentation, plagiarism or cheating.

See 2010/11 University Calendar, pp. 777 - 798, for details.

Text: "Organic Chemistry", Solomons & Fryhle, 9th ed., 2008

Recommended Text: "Study Guide", Solomons & Fryhle, 9th ed., 2008

Molecular Models: Extremely useful; "Darling" type recommended;

available at Organic Chemistry Store, Chem W1-32

Lab Manuals: "Organic Chemistry Experiments" &

"Laboratory Report Bookbook", Chem261, H. Wan, fa 2010 ed.,

available at Organic Chemistry Store, Chem W1-32

Course Outline: Textbook chapters 1 - 8, 10, 11; selected sections;

detailed checklists of topics will be provided during the course.

Course Schedule: See overleaf (includes exam dates).

Labs: Begin week of 13 Sep. 2010.

Safety glasses mandatory.

Read lab manual and prepare for the first lab during the week before. Room assignments to be posted by Fri, 10 Sep., near Chem E1-26.

Help Sessions: Theory & Lab: Room E1-34, open hours:

Monday 9 - 11, 1 - 5

Tuesday 9 - 5 Wednesday 9 - 5 Thursday 9 - 5

Friday 9 - 11, 1 - 3

Supplementary Information: • (lecture notes, homework, exam information,):

www.chem.ualberta.ca/~htaube

• exam scores: on eClass

(Topics Tentative, Exam Dates Firm)

| | Week | Theory | | Labs |
|----|-----------|--------------------|----------------------|-----------------------------------|
| # | Beginning | Tuesday | Thursday | |
| 01 | 06 Sep | _ | Intro | _ |
| 02 | 13 Sep | Bonding | Bonding | Check-In/ Recrystall ⁿ |
| 03 | 20 Sep | Bonding | Reaction Theory | Chromatography/ M.P. |
| 04 | 27 Sep | FG's/ IR | FG's/ IR | Infrared Spectroscopy |
| 05 | 04 Oct | Alkanes | Alkanes/ Quiz | Distillation |
| 06 | 11 Oct | Conformation | Conformation | _ |
| 07 | 18 Oct | Stereochemistry | Stereochemistry | Trimyristin |
| 08 | 25 Oct | Stereochemistry | Nucleophilic S & E | Analgesic Separations I |
| 09 | 01 Nov | Nucleophilic S & E | Midterm Exam | Analgesic Separations II |
| 10 | 08 Nov | Nucleophilic S & E | _ | _ |
| 11 | 15 Nov | Nucleophilic S & E | Alkenes | Stereochemistry |
| 12 | 22 Nov | Alkenes | Alkenes | Nucleophilic Subst ⁿ |
| 13 | 29 Nov | Alkynes | Alcohols | Final Quiz/Check-out |
| 14 | 06 Dec | Ethers | - . | _ |

FINAL EXAM: Friday, 17 December 2010, 14:00 h

Deferred Exam (as required): Tuesday, 18 Jan 2011, 13:00 h, Room TBA

Preliminary/Approximate Guide for Grade Assignments

2010 09 07 CHEM 164/261, A2 HT

| Avg. Course Mark | Grade (num. equiv.) | # of Students |
|------------------|---------------------|---------------|
| > 91 % | A+ (4.0) | 5 % |
| > 86 % | A (4.0) | 7 % |
| > 81 % | A- (3.7) | 12 % |
| > 76 % | B+ (3.3) | 15 % |
| > 71 % | B (3.0) | 16 % |
| > 66 % | B- (2.7) | 14 % |
| >61 % | C+ (2.3) | 11 % |
| > 56 % | C (2.0) | 8 % |
| >51% | C- (1.7) | 5 % |
| >49% | D+ (1.3) | 3 % |
| >45% | D (1.0) | 2 % |
| <45% | F (0.0) | 2 % |

| Abbreviation | Full Term | Abbreviation | Full Term |
|------------------|---------------------------|------------------|----------------------------------|
| A/B | acid/ base | g | gaseous |
| acc | according to | gem | geminal |
| add ¹ | additional | h, hi | high |
| amt | amt | i.e. | that is; (definition) |
| approx | approximate | ill | illustration |
| aq | aqueous | incl | including |
| atm | atmosphere | KE | kinetic energy |
| ax | axial | 1 | liquid |
| b/c | because | 1, lo | low |
| B/L | Bronsted - Lowry | lge | large |
| c/w | complete with | lvl | level |
| cat | catalyst | mech | reaction mechanism |
| cmpd | compound | MF | molecular formula |
| coeff | coefficient | mvmt | movement |
| conc | concentrated | N.B. | nota bene; note carefully |
| config | configuration | neg | negative |
| conform | conformation | org | organic |
| conj | conjugated | ox ⁿ | oxidation |
| const | constant | PE | potential energy |
| def | definition | pos | positive |
| diff | different | re | regarding |
| dil | dilute | red ⁿ | reduction |
| DofU | degree of unsaturation | ref | reference |
| e ⁻ | electron | req ^d | required |
| e.g. | for example | res | resonance |
| e/n | electronegative | rev | reverse |
| Ex | example | r.t. | room temp., ~ 20°C |
| edg | electron donating group | rxn | reaction |
| emr | electromagnetic radiation | S | solid |
| eq | equatorial | sat ^d | saturated |
| equil | equilibrium | sol ⁿ | solution |
| equiv | equivalent | sub | substituent |
| equ ⁿ | equation | TBA | to be announced |
| ewg | e withdrawing group | tot | total |
| exp | experimental | trtmt | treatment |
| FC | formal charge | vic | vicinal |
| FG | functional group | V.V. | vice versa; "opposite also true" |
| fig | figure | w/ | with |
| fwd | forward | w/t | without |
| | | xs | excess |