

GRANDE PRAIRIE REGIONAL COLLEGEDepartment of ScienceTwenty-ninth Session 1994-95

CHEMISTRY 2600:	Organic Chemistry		
PREREQUISITE:	Chemistry 1000 or 1040		
INSTRUCTOR:	Dr. John P. Sloan, Office #J207. Phone# 539-2004		
LECTURE:	MWF, 9:00 - 9:50 pm in J229		
ALBERTA TRANSFER CREDIT:	U of Alberta:	CHEM 260	6 credits
	U of Calgary:	CHEM 350	6 credits
	U of Lethbridge:	CHEM 2500/2600, or 2100/2200	6 credits
	Athabasca:	CHEM 3xx	6 credits
	Augustana U Col:	CHE 250/252	6 credits
	Concordia Col:	CH 260	6 credits
	The King's College:	CHEM 350/351	6 credits
	Canadian Union Col:	CHEM 241/242	8 credits

COURSE OUTLINE:Lecture Component:

A study of the compounds of carbon with emphasis on reaction mechanisms to illustrate the basic principles of organic chemistry. The main classes of organic compounds will be covered through studying the chemistry of their functional groups. Topics of study include: structure and bonding; physical properties; acidity and basicity; conformations of molecules; stereochemistry; addition, elimination and substitution reactions; structure-reactivity relationships; aromaticity and aromatic substitution; spectroscopic methods for structure determination; condensation reactions, and; carbohydrates, lipids, amino acids and proteins.

A representative selection of molecules found in agricultural, biological, environmental, industrial, medical, and pharmaceutical applications of organic chemistry will be discussed, e.g., molecules found in

agrochemicals, amino acids, carbohydrates, fibres, food additive, perfumes, polymers, and prescription drugs.

Laboratory Component:

Organic laboratory techniques using a microscale approach; preparation of some organic compounds, and; methods of qualitative organic analysis.

Tutorial Component:

Problem solving and discussion sessions with weekly problem sets. Regular tests will be given and marked.

Notes:

1. Lectures will be on Mondays, Wednesdays and Fridays from 9:00 to 9:50 in J229.
2. Laboratory Section L1 will be on Mondays from 15:00 to 17:50 in J116 and, Laboratory Section L2 will be on Mondays from 15:00 to 17:50 in J119.
3. Tutorial S1 will be on Wednesdays from 8:00 to 8:50 in J 207.

**TEXT BOOKS AND
LABORATORY ITEMS:**

The following books are required:

1. Wade, L.G. (jr), Organic Chemistry, 2nd edition, Prentice-Hall, 1991;
2. Pavia, D.L., Lampman, G.M., Kriz, G.S., and Engel, R.G. Introduction to Organic Laboratory Techniques: a Microscale Approach, Saunders, 1990, ISBN 0-03-025418-3;
3. A hard backed laboratory note book.

The following is highly recommended:

1. Molecular Structure Model Set B, Holden-Day, or the Allyn and Bacon Molecular Model Set for Organic Chemistry, and;
2. A Fieser Triangle for drawing chemical structures.

The following are supplementary books:

1. Wade, L.G.(Jr.), Simek, J.W., Organic Chemistry: Solutions Manual, 2nd edition.
2. Zubrick, J.W., The Organic Chem Lab Survival Manual: A Student's Guide To Techniques, 3rd edition, 1992.

Notes:

1. All required and supplementary books, molecular structure model sets, Fieser triangles, and lab coats are available at the College Bookstore.

EVALUATION:

The examination schedule and composition of the final grade is:

1.	First Semester Midterm Exam: Week of October 17 -----	10%
2.	First Semester Final Exam to be scheduled between Dec 12 & 20 --	18%
3.	Second Semester Midterm Exam: Week of February 13 -----	12%
4.	Second Semester Final Exam to be Scheduled between April 22 & 29 -	20%
5.	Laboratory -----	25%
6.	Tutorial Grading Component -----	15%
		100%

The grades are based on the nine point stanine scale and correlate with the following designations:

<u>Stanine</u>	<u>Designation</u>
9 -----	Outstanding
8 -----	Excellent
7 -----	Very Good
6 -----	Good
5 -----	Fair
4 -----	Pass
3	
2	
1	

Notes:

1. The two mid-term exams will each be of 2 hours duration and the final exams will be of 3 hours duration.
2. Between 5 and 15% of exam content will be taken directly from weekly problem assignments and tests.
3. A pass grade is essential for the laboratory component.
4. The Tutorial Grading Component consists of tests and will contribute towards 15% of the final grade. A 10 question test will normally be given each week during the tutorial hour. To encourage general discussion and active student participation, test questions may be answered within "paired teams". Tests not completed during the tutorial period are due within 24 hours without penalty. The marking scheme is:
 - 4.1 1 mark per correct answer with full details;
 - 4.2 1/2 mark per correct answer with no details;
 - 4.3 20% shall be deducted from the mark for each college business day that a test is overdue.
5. Regular attendance in lecture, laboratory, and tutorial components is a course requirement.