

WEST VALLEY COLLEGE
CHEMISTRY DEPARTMENT
Spring 2012

COURSE TITLE

Chemistry 12B, Organic Chemistry

INSTRUCTOR

Dr. Blaine Harrison Tel#: (408) 741- 4017 email: blaine.harrison@westvalley.edu
Web site: <http://www.westvalley.edu/wvc/sci/chem/harrison.html>

OFFICE HOURS

M: 11:45-12:30 T: 11:45-12:30 W: 11:45-12:30 Th: 11:45-12:30 SM19A

MEETING TIMES

Lecture: M-W 12:30-1:55 pm, SM33

Lab: M-W 2:05-5:15 pm, SM20

REQUIRED MATERIALS

- 1) Wade, Jr., Organic Chemistry, Seventh Edition
- 2) Solutions Manuel for textbook problems.
- 3) Pavia, et. al., Organic Laboratory Techniques. A Microscale Approach, 4rth Edition.
- 4) Molecular Model Kit for Organic Chemistry, Prentice Hall
- 5) Experimental Research Notebook, Jones and Bartlett Publishers (Bookstore)
- 6) Safety Goggles (Bookstore; if purchased elsewhere, must be approved by your instructor)
- 7) Calculator, Periodic Table, **Stapler**
- 8) Latex Gloves. (6 pairs or more)

Optional Materials

Lab coat.

Grading Scheme

<u>Minimum Course Score</u>	<u>Grade</u>	Course score formula
80%	A	$\frac{(3*M + F + L + HW)}{6.80} = G$
70%	B	
60%	C	
50%	D	

		Possible Points
	M= Average of three Midterm exams	300
Advanced Prep Work 2 pts	F= Final exam score	200
Lab 8 pts	L= Laboratory score	120
	H= Homework	60
	G= Grade in the course	

Total Points Possible=680

Lecture- Each of three Midterm exams will be worth 100 points, homework will be worth 60 pts (3 homework), and the comprehensive final exam will be worth 200 points. The homework assignments will be handed out separately in class and the problems in the book will not be collected or graded. If a student is absent during any exam, he/she will receive a grade of zero. At the discretion of the instructor, a makeup exam may be allowed for an urgent medical or legal situation which prevents a student from attending class. In such cases, all of the following requirements will apply: 1) Student must present documentation of the reason for absence (letter from doctor or court official, including address and phone number) to the instructor on the day student returns to school, 2) Exam must be made up within two days of missed exam, 3) Only one make-up exam is allowed per semester. Unethical behavior of any kind will result in the student failing that assignment. Work must be shown on all exams and home works to receive full credit.

Laboratory- All assigned laboratories and worksheets must be completed in order to pass the course. A problem-solving assignment, worksheet, or presentation is considered a lab experiment and must be completed before leaving the lab. Lab reports are due the next lab period after completing the lab and are due within the first five minutes of the scheduled lab period. If a lab report is turned in late it will be penalized twenty percent per day. Pre-laboratory work will be worth two points. If two students turn in labs with identical data, both students will receive a zero on that lab.

Make-up labs will not be permitted. If you are unable to complete an experiment from start to finish during the week that is scheduled, you may satisfy the requirement for that

experiment by completing and turning in extra homework problems. The student must discuss each make up assignment with the instructor prior to beginning the make up work. The make up problems will be due within two weeks of the missed lab. A maximum of one missed lab experiment may be made up in this manner. If a second experiment is missed for any reason, you will automatically be dropped from the class with a failing grade.

Attendance- Attendance is required in all labs. Students are expected to attend all classes. It is the student's responsibility to officially drop the class if they wish to. Failure on the part of the student to do so will result in a failing grade. All students (officially registered, dropped, or withdrawn) must check out of the lab before the end of the semester (last lab day). If you do not check out of lab by the last day, a hold will be placed on your records, and no grades will be issued.

Success- To be successful in a chemistry course requires diligence and taking advantage of the resources available.

- 1) Go to office hours.
- 2) Go over in detail past mistakes on homework and exams.
- 3) Read ahead and prepare for lecture.
- 4) Attend class on a regular basis.
- 5) Do all assigned homework and do as many unassigned problems as possible.
- 6) Study hard, at least 8-14 hours per week.
- 7) Form study groups.

Emergency- In case of an emergency a specific location will be selected as a meeting point. Under any circumstances, do not leave the campus unless authorized to do so.

Disabilities- West Valley College makes reasonable accommodations for persons with documented disabilities. Students should notify the Disability and Educational Support Program (DESP) at 741-2010 of any special needs.

Chemistry 12B: Lecture Schedule M-W 12:30-1:55

<u>Week</u>	<u>Date</u>	<u>Day</u>	<u>Chapter</u>	<u>Topic</u>
1	1-30	M	Intro	
	2-1	W	12	IR and Mass Spec
2	2-6	M	12	
	2-8	W	12	
3	2-13	M	13 NMR	
	2-15	W	13	
4	2-20	M	HOLIDAY	
	2-22	W	13	
5	2-27	M	15	HW#1 Due Conjugated Systems, UV Aromatic Compounds
	2-29	W	16	
6	3-5	M	EXAM #1 chapters 12,13,15	
	3-7	W	11,17	Review Reactions of alcohols
7	3-12	M	17	Reactions of Aromatic Compounds
	3-14	W	17	
8	3-19	M	17	Ketones and Aldehydes
	3-21	W	18	
9	3-26,28		Spring Break	
10	4-2	M	18	HW#2 Due
	4-4	W	18	
11	4-9	M	19	Amines
	4-11	W	EXAM #2 Chapters 11,16,17,18	
12	4-16	M	19	
	4-18	W	19	
13	4-23	M	19	Carboxylic Acids
	4-25	W	20	
14	4-30	M	22	Enols and Enolates
	5-2	W	22	
15	5-7	M	22	HW#3 Due
	5-9	W	22	

16	5-14	M	EXAM #3 Chapters 19,20,22,23
	5-16	W	Review
17	5-21	M	11:50-1:50 COMPREHENSIVE FINAL EXAM

Chemistry 12B Laboratory Schedule Sp 2012 (4th Edition)

<u>Week</u>	<u>Date</u>	<u>Day</u>	<u>Lab</u>
1	1-30	M	Green Sheets
	2-1	W	Lab notebook
2	2-6,8	M,W	Exp 14B Essential Oils from Spices: Oil of Cloves
3	2-13	M	Spectra Problem Sets IR
	2-15	W	Spectra Problem Sets Mass spec
4	2-20	M	HOLIDAY
	2-22	W	NMR Handouts
5	2-27,29	M,W	ID unknowns Handout
6	3-5,7	M,W	Exp 66 An Oxidation Puzzle
7	3-12,14	M,W	Exp 45 Benzocaine
8	3-19,21	M,W	Exp 10A Acetaminophen
9	3-26,28		Spring Break
10	4-2,4	M,W	Exp 44B 1,4-Diphenyl-1,3-butadiene
11	4-9,11	M,W	Exp 42 Preparation of an α,β -Unsaturated Ketone
12	4-16,18	M,W	Exp 43 Enamine Reactions: 2-Acetylcyclohexanone
13	4-23,25	M,W	Projects
14	4-30,5-2	M,W	Projects
15	5-7,9	M,W	Exp 41 The Aldol Condensation Reaction
16	5-14	M	Clean up, check out
	5-16	W	Review

Suggested Problems for Chem 12B (7th Edition Wade)

<u>Chapter</u>	<u>Problems</u>
12	2-11,14-20,22-29
13	2-18,20-26,28-36,38-53
15	14-18,21,22,28-30,32,33,34,38
16	4,7,8,10,12,13,15,17-20,22,30,32-35,39,41,42,48,49
17	1-26,28-30,34,38,40,44-49,52-54,56,57,59,61,66,68
18	6-22,24,25,27-29,31,33-37,40,48-52,56,59-63,66
19	1,4,11-21,23,25-27,29-32,40-42,44-48,50,51,60
20	11,18-21,24,35,36,39,41,43,44
22	1-4,6-13,15,17-19,22-26,28-34,36-50,52-59,64-71,73-75,77

Extra Spectra Problems

<u>Chapter</u>	<u>Problems</u>
14	7,46,47
15	25,38,45,46
17	50,62
18	2-5,41-45,47,67,73,74
19	7-10,43,53,56,58,59
20	7-10,40,45,50
21	2-5,64-67

Student learning outcomes: Lec, Understand fundamental reactivity of aromatic compounds including reaction mechanisms, definitions, and predicting the outcomes of reactions.