

Syllabus
CHEM 2230L (Organic Chemistry I Laboratory)
Spring Semester 2011, 1 semester hour

Sections, Instructors, Classrooms, and Contact Information

<u>Sect.</u>	<u>Day</u>	<u>Time</u>	<u>Location</u>	<u>Instructor</u>	<u>Office</u>	<u>Phone #</u>	<u>e-mail</u>
1	T	7:50-10:40	NCF 361	Dr. Kelley	305	520-7373	atkelley@xula.edu
2	T	1:15-4:05	NCF 361	Dr. Kelley	305	520-7373	atkelley@xula.edu
5	R	1:15-4:05	NCF 361	Dr. Weaver	317	520-5080	sweaver1@xula.edu

Office Hours:

Dr. Kelley: M 8:30-10:30 W 9-11 R 9-11

Dr. Weaver: M 11-12, T 4:30-5:30, W 12-1, R 9-11 & 430-5:30

Required Materials:

1- Lab. Manual/Notebook: K. Crago, S. DiMaggio, M. Foroozesh, V. Giannamore, G. Goloverda, T. Jordan, K. Morgan, M. Polito, I. Politzer, T. Ross, and J. Sevenair, "*Organic Chemistry Laboratory Manual*", Sixth Edition, Wiley Custom Services, 2005.
No other edition is acceptable.

2- Updated procedures and notes are located at: <http://www.xula.edu/chemistry/crs-orgeclab.php>

3- Lab Coat

4- Safety goggles

5- Full Shoes

6- Non-programmable calculator (Phones may not be used during quizzes or tests).

***The goggles and lab coats are sold in the chemistry stockroom, while the text book and the manual are sold in the University Book Store. **You will not be allowed to perform any experiments without your goggles, lab coat and full shoes.**

Useful Additional Materials

Textbook: Williamson, Kenneth L. ,*Macroscale and Microscale Organic Experiments*, Fourth Edition, Houghton Mifflin Company, Boston, 2003. (This is not required but may be helpful.)

Course Description

Students are introduced to microscale and macroscale organic laboratory techniques, selected instrumental analysis, and chemical safety. Students learn to critically assess their data and observations, and to prepare organized, scientific reports from their findings. In the second semester, these techniques are applied to experiments which correlate with material presented in the lecture. Students get hands- on experience with organic reactions, syntheses, instrumental analyses, and interpretations as well as presentation of results.

Course Objectives:

During this first semester course students will learn a variety of organic chemical analysis and purification techniques. Students will learn proper organic lab techniques and chemical safety. Students learn to critically assess their data and observations and form logical conclusions. Students will use the techniques learned to deduce the identity of unknown

compounds, assesses the purity of materials and purify materials. In the second semester, these techniques will be applied to synthetic experiments.

Co requisites: CHEM 2210/2210D.

Prerequisites: 1020, 1020D and 1021L. See page 9 of the lab manual for a more complete explanation of corequisites and prerequisites.

Course Requirements:

Each student is expected to come fully prepared for each lab. Students should read the experiment in the laboratory manual and read the supporting notes on the internet before coming to class (<http://www.xula.edu/chemistry/crs-orgleclab.php>). Students must be dressed appropriately in order to conduct the experiment in a safe manner. Any student who fails to complete more than two labs will receive a grade of F for the course. No data sheet may be turned in without carrying out the experiment. You are expected to be on time for each class. See page 10 of the manual for more details.

Any student who is dressed unsafely, or acts in an unsafe manner will be asked to leave the laboratory. This will be recorded as an absence.

There are 11 graded experiments scheduled for this semester. Each experiment is accompanied by a quiz, a laboratory notebook write-up, and a lab data sheet. The lowest two quiz grades and the lowest data sheet grade will be dropped. If a student receives a zero for a quiz or data sheet due to academic dishonesty issues, that zero will not be dropped. There will also be a cumulative final examination. Your grade will be based on these and on your performance evaluation as described below.

Absences

Make every effort possible to attend each and every lab. It is very difficult and at times impossible to make up labs. If you know in advance that you are going to miss a lab, discuss this with your instructor as soon as possible. There are 11 experiments in this course. Each missed lab will lower the grade by approximately 1/10 or 1 letter grade. Any student who fails to complete more than two labs for any reason, will receive a grade of F for the course. If you miss a lab, contact your instructor as soon as possible. The first experiment missed for any reason will be your 'dropped' experiment. If another experiment is missed, producing a documented valid excuse will allow it to be prorated or a make-up lab scheduled. If no documentation supporting a valid absence is available, no points will be awarded for that experiment. The reason for an absence must be documented in writing and deemed valid by the instructor (i.e. a written excuse from a physician, documentation of death in the family), then the instructor will attempt to provide the student with a make up laboratory session. Due to space and time constraints there is no guarantee that a make- up lab will be possible

Grading

A total of 550 points will be available during this course. Your grade in the class will be based on the number of these possible points you earn.

A mid-semester grade will be assigned by March 1. The grade given at that time will be based on the percentage of possible points obtained (90% ≥ A, 80% ≥ B, 70% ≥ C, 60% ≥ D, 60% < F).

MSDS Assignment. 10 points (1.8 %). This safety oriented assignment is given the first day of lab. No-make ups will be available to any student registered at the time of the class.

Quizzes. 150 points (27 %). A quiz will be given at the beginning of each lab. Each quiz is worth 15 points. Twelve quizzes will be given during the semester, the lowest two scores will

be dropped. (Unless that score was received due to academic dishonesty issues.) If you come late you will not receive additional time. If you miss the quiz you will receive a zero. The quiz covers what was done last week as well as what will be done this week. Approximately 10 of the 15 points are on what was completed the previous week. Approximately 5 of the 15 points are on what will be done the current week. Questions may be taken from the lab manual, **the lab notes posted on the internet**, and the discussion material presented by your instructor. There are a total of eleven quizzes with the lowest being dropped. (15 x 10= 150). See the attached lab schedule for more details.

Laboratory Data Sheets. 150 points (27%). A data sheet must be filled out and turned in with the completion of each experiment. Separate lab reports are not required until second semester. Typically the data sheets must be turned in before you exit the laboratory or at another time specified by your instructor. Late data sheets do not have to be accepted. Data sheets will not be accepted for a lab not conducted that lab period. (If a student is retaking this class, they must do the experiments again.) Each data sheet is worth 15 points; there are eleven experiments, with the lowest data sheet being dropped for a total of 150 points. See the attached schedule for more details.

Notebook. 90 points (18%). Nine points are possible during each experiment. There are eleven experiments and the lowest grade is dropped (9x10=90). This is based on your laboratory notebook write-up and good data keeping. A proper laboratory notebook must be kept following the instructions provided in the lab manual, except when otherwise instructed by your instructor. You must have your pre-lab prepared before coming to class. If your pre-lab is not complete before the start of class, you will lose 10 points, plus you will not be allowed to work independently during this experiment. At the end of class you will turn in the original pages (leave the duplicate pages for yourself) of your notebook which contain the data and observations for the day's experiment before you leave the lab.

Percent Yield Calculation Assignment. 10 points (1.8 %). This assignment will be given late in the semester. These calculations will be used routinely in second semester.

Final examination 100 points (18 %). The final exam is comprehensive and will cover all concepts covered in class. There will be theory, application, and practical based questions. This typically is a difficult exam and it is not uncommon for students to drop a letter grade due to poor performance. Do not take the final lightly. The final will be given during the evening of the last normal class day before quiet day. See the attached schedule for more details.

Daily Performance grade. 40 points (8 %). Each student may earn up to 4 points during each of the 11 lab classes. The lowest grade will be dropped. Points will be deducted for each of the following; not wearing safety goggles, lab coats or closed toes shoes, arriving very late or finishing late, having a phone visible during class, texting during class (-4), not paying attention during pre-lab lecture, talking during pre-lab lecture, improper disposal of waste, improper equipment usage, improper recording of data in notebooks (not paper), lack of focus or general preparedness in class, and asking excessive questions about items covered in pre-lab lecture. An average grade in this section is approximately 34.

Quizzes	150	(27.3%)
Data Sheets	150	(27.3%)
MSDS	10	(1.8 %)
Notebook	90	(16.4%)
Percent Calculation	10	(1.8 %)
Final Exam	100	(18.2 %)
<u>Performance</u>	<u>40</u>	<u>(7.3%)</u>
Total points	550	(100.0%)

Points Earned	Grade Earned
495 to 554	A
440 to 495	B
385 to 440	C
330 to 385	D
329 or below, or >2 absences	F

The instructor may discretionarily lower the thresholds, so as to reflect a “curve” of overall class performance. The thresholds will not under any circumstances be raised.

Student Behavior and Classroom Decorum:

Free discussion, inquiry and expression are encouraged in this class. However, classroom behavior that interferes with the instructor’s ability to conduct the class or undermines the ability of any student to benefit from instruction is not acceptable. Examples include, but are not limited to: being disrespectful to the instructor or another student, disruptive interactions with another student, and holding side conversations while the instructor is lecturing. Please be aware of your own behavior and how it may negatively impact others ability to learn.

Cell Phones.

Turn off phones when entering the classroom. Keep cell phones put away during class. Do not text message, use the calculator function, or answer the phone during class. If this occurs you may be asked to leave class and/or have points deducted. If there is an extenuating circumstance for having the phone on in class, or the need to accept a call during class, then please inform professor prior to class. Do not have a cell phone on your person while taking a quiz or exam. Having a cell phone within reach while taking a quiz or test is grounds for assigning a zero and reporting an incident of Academic Dishonesty. Using a cell phone to send or receive information during a quiz or exam is grounds for a F in the class.

Safety:

Many materials used in organic chemistry laboratories are hazardous to human health, especially if used incorrectly or in certain situations. Students need to use prudent judgment and follow all safety precautions.

Pregnancy:

Risks to the fetus during pregnancy may be different or greater than the common hazards associated with chemicals. If you are pregnant or become pregnant during the semester, immediately consult with your doctor about whether or not you should remain in this class. We highly recommend you inform your instructor, so special safety issues may be addressed. A list of all chemicals used in this lab may be found on the course website. We will be happy to provide you and your doctor with all MSDS (material safety data sheets) that you request. This is a serious decision that should be made with the full participation of your physician.

Academic Integrity

The CAS Academic Integrity Policy will be followed in this course. According to the policy, academic misconduct includes, but is not limited to, the following:

1. Using unauthorized materials in completion of an exam, quiz, or assignment.
2. Assisting or gaining assistance from an unauthorized source during an exam, quiz, or assignment.
3. Providing assistance to another student in a manner not authorized by the instructor.
4. Obtaining an examination or assignment in an unauthorized manner.
5. Using material from a source without giving proper citation.
6. Fabricating or altering data.
7. Submitting work to one class that is substantially similar to work submitted for another class without prior approval from the instructors involved.
8. Submitting written work that is not completely one's own or allowing others to submit one's work.
9. Destroying or altering the work of another student.
10. Committing any other violation of academic integrity as described in this syllabus.

Specific examples of academic misconduct include:

- the use of a cell phone during an exam or quiz for any reason (even as a calculator);
- talking during an exam or quiz;
- using anything other than explicitly authorized materials on a quiz or exam;
- attempting to read from another student's quiz or exam;
- copying class assignments, including sharing files to analyze or present data;
- using data that you did not collect in a report without proper attribution;
- working with others on any assignments (in or out of class) when not authorized.

You are responsible for arriving on time for all quizzes or exams, as you will not be permitted to begin after any other student has left the room. You are responsible for all written materials on, under, and near your seat during quizzes and exams, so it is in your best interest to ensure that the desk surface is clear of writing and that no extraneous papers are within your line of sight (both when you begin and finish). Cell phones should always be off and inside a bag during a quiz or exam; your instructor will not give you the benefit of the doubt if a cell phone is used or visible. The CAS policy makes no distinction between the person receiving unauthorized assistance (copying an assignment) and the person providing the assistance (allowing work to be copied); both actions are academic misconduct.

Disciplinary action in response to incidents of academic dishonesty may range from a lowered grade on an individual assignment, a zero on the assignment, to an F being given in the class. Premeditated academic misconduct during an exam (for example, using a cell phone to text or preparing a "cheat sheet") will result in the student being asked to leave immediately and a failing grade for the course. In accordance with Xavier Policy, instances of lowering of grades due to Academic Dishonesty will be reported in writing to the dean of the college of arts and sciences. Repeated incidents of academic dishonesty, will be dealt with by Academic Affairs, and may result in temporary or permanent expulsion from the university.

Refer to http://www.xula.edu/cas/documents/cas_academicIntegrity.pdf for the full CAS Academic Integrity policy.

Additional discussion of academic integrity and various course policies and requirements in the first four chapters of the lab manual. Those items are considered to be part of the syllabus.

Do not copy the work of another student. Do not try to pass off another's student work as your own. Keep your eyes on your own paper during all quizzes and tests. Do not have a cell

phone within reach when taking a quiz or exam. Write, in your own words, do your own data sheets.

Cheating is absolutely not tolerated. In cases where cheating on any activity has clearly been demonstrated, the student will receive an F in the course.

Emergency Response

In the event on an emergency, including but not limited to a hurricane evacuation, please check the Blackboard page for this section, your xula e-mail account, and the university emergency web site at <http://www.xula.edu/temp/emergency/index2.html>.

Summary of points for the semester

	Quiz	Notebook	Datasheet	Perform	Other
Week 0- Intro, MSDS	-x-	-x-	-x-		/10 MSDS
Week 1- Melting point	___/15	___/9	___/15	___/4	
Week 2-IR	___/15	___/9	___/15	___/4	
Week 3- Acid-Base	___/15	___/9	___/15	___/4	
Week 4-	___/15	___/9	___/15	___/4	
Week 5-	___/15	___/9	___/15	___/4	
Week 6-	___/15	___/9	___/15	___/4	
Week 7	___/15	___/9	___/15	___/4	
Week 8-	___/15	___/9	___/15	___/4	
Week 9-	___/15	___/9	___/15	___/4	
Week 10-	___/15	___/9	___/15	___/4	
Week 11-	___/15	___/9	___/15	___/4	___/10 Percent Yield
Week 12-	___/15	-x-	-x-	-x-	
Week 13-	-x-	-x-	-x-	-x-	-x-
Week 14-	-x-	-x-	-x-	-x-	Final Exam = ___/100
Total	___/180	___/90	___/165	___/44	
Lowest of 1 st 4 columns	___/15	___/9	___/15	___/4	0
2 nd Lowest of Quiz	___/15	-x-	-x-	-x-	0
Adjusted Total	___/150	___/90	___/150	___/40	___/120

Total Adjusted Points = _____

Points Earned

495 to 554

440 to 495

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329 or below, or >2 absences

Grade Earned

A

B

C

D

F