Welcome to Chemistry 1AL at UC Berkeley

Instructor: Pete Marsden, petermarsden@berkeley.edu, 323 Latimer

Course Information: Monday Lecture, 4-5 PM in 1 Pimentel
Wednesday Lecture, 4-5 PM in 1 Pimentel
Friday Lecture, 2-3 PM in 1 Pimentel

Pre/Corequisites: Concurrent enrollment in Chem 1A or a C- in Chem 1A.

Lab Exam Date: **Friday December, 5. 7:30 PM. Room to be determined.**

Office Hours: *Dr. Pete Marsden:* My office hours will be in 323 Latimer. The times are still to be determined.

TA's Office Hours: There will be a Google Calendar found on bSpace with the TAs available times. They will be holding office hours in 106 Latimer.
Please use this link.

Course Website

The course website is http://bspace.berkeley.edu . If you are enrolled in the course, you will have access to this site. Announcements, experimental details and other items will be posted on this website. It is recommended that you check this site daily to see if there are any relevant announcements that you might have missed in class.

Email

Professor: *Pete Marsden*: petermarsden@berkeley.edu.
Head GSI: *Eugene Yedvabny:* eyedvabny@berkeley.edu.
All emails concerning Chemistry 1AL should have "Chem 1AL" as part of the subject line.

Lectures

Lab lectures will be one hour each. The Friday and Monday lectures will be repeats of the previous Wednesday Lecture. We will cover concepts that will be explored during the following week's labs.

Laboratory

Laboratories are 3 hours long. You should plan on being in lab for this period of time. There are 11 graded experiments (10 points each) and a power point presentation (12 points). You will be allowed to drop the lowest grade of your 11 experiments but not allowed to drop your score for the power point. This will add up to a total of 112 points. **See the section in this handout on lab report grades to determine what is necessary for the successful completion of a lab.** It is your responsibility to read this information. As you will see, there are important consequences associated with not attending lab and/or not turning in completed laboratory reports.

Required Texts

- There are no required texts for this class. Necessary experiment information will be posted on the class website every week. Observations and notes will be taken on the experimental report sheets.

Ethics

It is assumed that all work you do for this laboratory class is original. This includes the prelab, in-lab observations and data. You should not attempt to bring any data or notes that are not specifically allowed to lab exam.

All of this falls under a behavioral category I refer to as Ethical Common Sense. Unethical behavior in this class will result in an F in the course and you will be reported to the Office of Student Conduct.

Lab Exam

There will be one written lab exam worth 30 points. **The lab exam date will be December 5 from 7:30 to 9:30 pm in a room to be determined**. The exam will focus on material that has been covered in both lecture and lab. This exam MUST be taken AND a score of ≥10 points must be obtained in order to complete the class. That is, if you score less than 10 points on the exam, you will receive an incomplete in the class regardless of how many total points you have accumulated. The incomplete will need to be satisfied within two semesters by taking the lab exam offered in Chemistry 1AL in Spring of 2015 or Summer 2015. A score of ≥10 points will warrant completion of the course.

Note: If you already have three zero's in the course at the time of the lab exam, you do not need to take the lab exam as you have already failed the course.

Pre-Labs

Each experiment has a pre-lab associated with it. The pre-labs will be done on separate paper and brought to lab. **If a pre-lab is not complete, you will not be allowed to participate in the laboratory experiment. Please note**** There is a pre-lab due for your first lab experiment.**

Lab Attendance and Lab Scores

In order to receive points for any given lab, the following conditions must be met:

- You must attend lab.
- Prior to attending any given laboratory period you must have attended the lecture preceding that experiment or lab period.
- You must prepare a prelab following the instructions posted for each experiment.
- You must arrive to lab on time, which means no later than Berkeley time (10 minutes after the hour). In general, the first 10-15 minutes of every laboratory period are dedicated to a safety discussion, which is an important part of the experiment. Therefore, if you show up late you will not be allowed to participate in lab for that day.
- You must wear protective clothing and eyewear during the laboratory period. Your GSI can ask you to leave the lab for the day if you are not wearing such clothing or eyewear.

- You must record detailed observations about the experiment. There are observation prompts throughout the experimental procedure and corresponding space on your report sheet.
- Before leaving lab, you must meet with your GSI who will ask you to confirm that certain data is present in your report sheet.

If you do not complete all of the above conditions for any given lab, you will receive a 0 for that experiment. The consequences of multiple 0s are as follows:

- If you receive two zeros during the semester, you not only will lose a total of 10 points, but your course grade will also be dropped by one third of a grade. For example, if you earn enough points to get a B+ in the class, you will receive a B.
- If you receive three zeros you will receive a failing grade in the course.

Grades

The point total for this course is 142. These are broken down as follows:

- 100 points for lab assignments (allowing for one dropped score)
- 12 points for the Polymers Power Point
- 30 points for the Lab Exam

Grades at the end of the semester will be assigned as follows:

Grade	Includes	Percentage
A	A and A-	90-100
B	B+, B, and B-	80-89
C	C+, C, and C-	70-79
D	D	60-69
F	F	0-60

Lab Schedule: Chem 1AL Fall 2014

Dates	Experiment
Aug 28, 29 Sep 1 (Th,F,M)	**No Lab**
Sep 2-8 (Tu-M)	Experiment #1. Smells: How the Nose Knows; Check-in; Safety Video
Sep 9-15 (Tu-M)	Experiment #2: Polymers 1, Density
Sep 16-22 (Tu-M)	Experiment #3: Polymers 2, Formulations
Sep 23-29 (Tu-M)	Experiment #4: Polymers 3, Contest (Polymer Power Point Proposal Due)
Sep 30-Oct 6 (Tu-M)	Experiment #5: Polymer Power Point Presentation
Oct 7-13 (Tu-M)	Experiment #6: Equilibrium
Oct 14-20 (Tu-M)	Experiment #7: Depolymerization and Titration (PLA/PET) 1
Oct 21-27 (Tu-M)	Experiment #8: Depolymerization and Titration (PLA/PET) 2
Oct 28-Nov 3 (Tu-M)	Experiment #9: Biofuels 1, Seeds and Synthesis
Nov 4-Nov 10 (Tu-M)	Experiment #10: Biofuels 2, Seed Count and Viscosity
Nov 11-Nov 14 (Tu-F)	**No Lab**
Nov 17-21 (M-F)	Experiment #11: Biofuels 3, Combustion
Nov 24-Nov 28 (M-F)	**No Lab**
Dec 1-5 (M-F)	Experiment #12: Light Inquiry; Check-out

NOTE: Most lab weeks run from Tuesday through Monday. Starting November 17, the lab weeks run Monday through Friday.

Lecture Schedule: Chem 1AL, Fall 2014

Days	Topic
Aug 29, Sep 1 (F,M)	**NO LAB LECTURE**
Sep 3, 5, 8 (W,F,M)	Intro to bonding and polymers
Sep 10,12,15 (W,F,M)	Intro to functional groups and hydrogen bonds (Cross-linking)
Sep 17, 19, 22 (W,F,M)	More on polymer cross-linking
Sep 24, 26, 29 (W,F,M)	Example of polymer presentations / Intro to Le Chatelier's Principle
Oct 1, 3, 6 (W,F,M)	Equilibrium and Acid/Base
Oct 8, 10, 13 (W,F,M)	Acid/Base titrations
Oct 15, 17, 20 (W,F,M)	Acid/Base titrations continued
Oct 22, 24, 27 (W,F,M)	Toxicity and Biofuels
Oct 28, 30 Nov 3 (W,F,M)	Biofuels and Properties
Nov 5, 7, 10 (W,F,M)	Combustion
Nov 12, 14 (W,F)	**NO LAB LECTURE**
Nov 17, 19, 21 (M,W,F)	Combustion wrap up and Intro to Light and Spectroscopy
Nov 24, 26 (M,W)	**NO LAB LECTURE**
Dec 1, 3, 5 (M, W, F)	Review of Lab Lectures (Prep for Lab Exam Dec 5, 7:30 PM)

NOTE: Most lab lecture cycles begin on Wednesday with a repeat lecture on Friday and Monday. Starting Nov 17, the lab lecture cycle begins on Monday.