

Chemical Principles Laboratory II

Chemistry 1225
Robert Alumbaugh
Fall 2019 Course Syllabus
1 credit

Dates (Week Of)		Experiment/Activity
August	26 th	Course Policies & Safety Review – Lab Drawer Check-In
Sept	9 th	Excel
Sept	16 th	Colorimetric Determination of an Equilibrium Constant
Sept	23 rd	Freezing Point Depression
Sept	30 th	Base Hydrolysis of Ethyl Acetate
Oct	7 th	Titration of Acids and Bases
Oct	14 th	Determination of K_a of a Weak Acid
Oct	21 st	Determination of K_{sp} for Calcium Hydroxide
Oct	28 th	Buffers
Nov	4 th	Electrolysis, the Faraday and Avogadro's Number
Nov	11 th	Activity Series
Nov	18 th	TA/Course Evaluations – Score Check – Lab Drawer Check Out

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Materials

Lab Text (required): "Chemistry 1225 Lab" – USU Bookstore printing
Lab Notebook (required): "Student Lab Notebook" from the USU bookstore
 (carbon-copy pages absolutely necessary)
Goggles, lab coats, full-length jeans with no holes, socks, and "complete" shoes are required in the laboratory.
 The lab fee of \$75 is used to purchase equipment and supplies for the laboratory as well as a small portion for teaching assistant compensation.

Grades

A score of 90% is guaranteed an A- and 95% or better is guaranteed an A. Final scores will be rounded to nearest one's place (94.4% = 94% and 94.5% = 95%).

Check-In, Safety Agreement	50 points
10 Lab reports @ 100 pts each (Worst lab dropped)	900 points
Pre-lab questions	10 points
Lab write-up	80 points
Lab clean-up (Collective section)	10 points
Total for each lab	100 points
Check-out / Course Evaluation	50 points
Total Points Possible	1000 points

Policies and Procedures

1. The administration of Chemistry 1225 will adhere strictly to the policies (including the issuing of incompletes) outlined in the USU 2018 – 2019 General Catalog.
2. Qualified students with disabilities may be eligible for reasonable accommodations. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll-free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.
3. Attendance at **all** the assigned meetings is required. Excused absences include: (1) school excused absences outlined in the general catalog, (2) illness, and (3) a family emergency. Planned family trips, vacations, outings, and weddings are not excused absences. Students should notify the TA in advance, if possible, prior to missing an experiment. Students missing an experiment will have one week to notify the TA that they have a valid excuse. A missed experiment that is not made up will be scored as **zero**. One lab score, usually the worst, will be dropped.
4. Labs may be made up **ONLY during the week of the missed experiment** with documentation of a USU verified excused absence at the discretion of the course instructor. Written permission must be obtained from the course instructor. Due to the compressed nature of the Summer term there is no possibility to make up a missed lab.
5. Individuals not wearing safety goggles, lab coats, full-length jeans with no holes, socks, and “complete” shoes (no sandals or pumps) will not be allowed in the laboratory, no exceptions.
6. All students must read and sign the Utah State University Chemistry and Biochemistry Departmental *Laboratory Safety Agreement Documentation* before beginning lab experiments.
7. Students must be registered for the lab section they attend. Failure to do so will result in an F letter grade being assigned to the university.
8. Notebooks: Students are required to keep an organized record of lab work in their lab notebooks. An experiment procedure that is detailed enough for someone else to follow and repeat the experiment should be entered into the lab notebook **before starting** each experiment. Your lab TA will provide additional specific information regarding the organization of what to include in the lab notebook. In order to ensure that students have reviewed each experiment and the lab notebook is properly prepared. Lab notebook checks will be performed at the beginning of each experiment in which the TA will check the introduction and procedure section for the current experiment. All work done in the lab must be summarized in the note book. *No writing on the lab report forms is permitted during the lab periods.* All notebook entries must be in ink. Incorrect entries and mistakes should be lined out and followed by correct entries.
9. Each lab report is due at the beginning of the next laboratory session. Late reports will be assessed a 10% penalty per week. In the case of an excused absence on the day a lab report is due the student will have until the next assigned laboratory session to turn in their report without penalty. The lab report for the final experiment will be due at the beginning of the lab check-out period.
10. Students must review all lab course scores at the score check meeting time (June 13th). It is also recommended that students retain all scored course laboratory work. Teaching assistants will not declare a student’s final lab course grade at the score check meeting.
11. The Banner/Access system will automatically drop a student from the CHEM 1225 lab course if the student drops the concurrently enrolled CHEM 1220 lecture course. Students that have completed all of the experiments through *Determination of the Ka of a Weak Acid* may make a special request to Mr. Alumbaugh to remain registered for the CHEM 1225 lab course.

Course Objectives and Assessment

Chem 1225 laboratory experiments are designed to cover a range of general chemistry concepts covered in the Chem 1220 lecture course. The experiments deal with the determination of chemical composition and characteristics, acid/bases and their salts, spectroscopy, the characterization of reactions, and electrochemistry.

Assessment of the course will include an end-of-semester evaluation seeking suggestions for course improvement.