



# Chemical Principles Laboratory I

Chemistry 1215 – Brigham City  
Dr. Harris  
Fall 2021 Course Syllabus  
1 credit

Dates		Experiment/Activity
September	3 <sup>rd</sup>	<b>Course Policies – Safety Review</b>
September	10 <sup>th</sup>	Lab Drawer Check In – Basic Lab Techniques Part 1 – Excel
September	17 <sup>th</sup>	Basic Lab Techniques Part 2 – Excel
September	24 <sup>th</sup>	Physical Separation of the Components of a Solid Mixture
October	1 <sup>st</sup>	Chemical Reactions – “A Greener Approach” Part 1
October	8 <sup>th</sup>	Chemical Reactions – “A Greener Approach” Part 2
October	22 <sup>nd</sup>	Empirical Formula
October	29 <sup>th</sup>	Cu Later – Chemical Reactions of Copper
November	5 <sup>th</sup>	Atomic Spectra
November	12 <sup>th</sup>	Molecular Modeling
November	19 <sup>th</sup>	Lab Drawer Check Out – Course Evaluations – Score Check
December	3 <sup>rd</sup>	Chromatography

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## Materials

**Lab Notebook (required):** "Student Lab Notebook" from the USU bookstore  
**Splash goggles, lab coat, full-length jeans with no holes, socks, and “complete” shoes are required in the laboratory. Face masks are recommended.**

The lab fee of \$75 is used to purchase equipment and supplies for the laboratory.

## 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/Signed Lab Safety Documentation @ 20 pts.....	20 points
5 Unannounced lab notebook checks @ 10 pts.....	50 points
7 Lab reports @ 20 pts.....	140 points
Check Out/Course Evaluation.....	20 points
<b>Total.....</b>	<b>230 points</b>

## Policies and Procedures

1. The administration of Chemistry 1215 will adhere strictly to the policies (including the issuing of incompletes) outlined in the USU 2021 – 2022 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. Service Animals in the CHEM 1215 lab: Utah State University is committed to providing access for service dog handlers. Due to the unique nature of the laboratory environment service animal handlers must meet with the Disability Resource Center prior to bringing a service dog into the lab. The purpose of this meeting is not to prevent you from having your service animal with you but rather to understand how to best accommodate your needs and the needs of your animal. Please contact the Disability Resource Center at 435-797-2444 or [drc@usu.edu](mailto:drc@usu.edu) to set up an appointment.
4. COVID-19 teaching lab protocols - In order to continue to provide various forms of face-to-face instruction at USU, and to limit the spread of COVID-19 during the pandemic, students are asked to follow certain teaching lab protocols during the fall 2020 semester. These protocols are based on CDC, state, and local health department guidelines and requirements are in place not only for your safety but also the safety of the entire campus community.
  - a. Face coverings are recommended in all classrooms and teaching laboratories.
  - b. Follow faculty instructions regarding social distancing and entering/exiting classrooms.
  - c. Stay home when you are sick, however mild your symptoms.
  - d. Wash your hands frequently with soap and water.
5. Attendance at all the assigned meetings is required. A missed experiment which has an excused absence will be made up by appointment only with the last scheduled experiment (Chromatography). 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 Dr. Harris in advance, if possible, prior to missing an experiment. Students missing an experiment will have one week to notify Dr. Harris that they have a valid excuse. A missed experiment that is not made up will be scored as **zero**. Please contact Dr. Harris if you are required to miss multiple experiments, due to a 14-day quarantine, to receive specific direction regarding the completion of the missed experiments.
6. Individuals not wearing cloth face masks, 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.
7. All students must read and sign the Utah State University Chemistry and Biochemistry Departmental *Laboratory Safety Agreement Documentation* before beginning lab experiments.
8. Students must be registered for the Brigham City lab section they attend. Failure to do so will result in an F letter grade being assigned to the university.
9. 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. Dr. Harris 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, 5 unannounced lab notebook checks will be performed at the beginning of the experiment in which Dr. Harris will quickly review each notebook for the prepared experiment information. All work done in the lab must be summarized in the notebook. *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 crossed out and followed by correct entries.
10. Each lab report is due at the beginning of the next laboratory session and will be e-mailed directly to Dr. Harris ([doug.harris@usu.edu](mailto:doug.harris@usu.edu)). Late reports will be assessed a 10% penalty per week. The lab report for the final experiment (Chromatography) will be due by 5 pm MST Monday the 6th of December.
11. Students must review all lab course scores at the score check meeting time (November 19<sup>th</sup>). It is also recommended that students retain all scored course laboratory work. Dr. Harris will not declare a student's final lab course grade at the score check meeting.
12. The Banner/Access system will automatically drop a student from the CHEM 1215 lab course if the student drops the concurrently enrolled CHEM 1210 lecture course. Students that have completed all of the experiments up to the Cu Later experiment may make a special request to Dr. Harris to remain registered for the CHEM 1215 lab course.

## Course Objectives and Assessment

Chem 1215 laboratory experiments are designed to complement the Chem 1210 lecture course. The experiments deal with basic chemistry techniques, assessment of data, synthesis of compounds, determination of chemical composition and characteristics, chemical separations, and the characterization of reactions.

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