

Elementary Chemistry Lab

CHEM 1115

Course Description

Graded laboratory. It is recommended that students take CHEM 1110 in the same semester as this course.

Pre-requisite(s): MATH 1010 or appropriate Accuplacer score (MATH 1020 for Nursing majors). Recommended corequisites: CHEM 1110. Graded laboratory taken concurrently with CHEM 1110.

Course Student Learning Outcomes

Students taking this course will demonstrate competence in basic substantive chemistry laboratory skills; competence in communication skills including reading and recording laboratory instructions and results appropriately; develop quantitative literacies related to chemical measurements and instrumentation used in the lab; and critical thinking skills such as identifying unknown samples based on laboratory observations.

Required Text or Materials



Title: ANSI (American National Standards Institute) or OSHA (Occupational Safety and Health Administration) approved splash-guard safety goggles.

Subtitle: Approval is usually stamped on the goggles or the packaging.



Title: Lab coat or protective apron

Subtitle: This is optional, but will protect your body and your clothing.

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Safety & Laboratory Rules

Students are required to know the location of laboratory safety equipment. The equipment found in the chemistry laboratory includes the following: eyewash and shower station, fire blanket, first aid kit, first aid procedures, emergency phone numbers, fire extinguisher, fire exit, broken glass container, and the closest fire alarm to the room.

Students must be aware of the evacuation plan for the building. Basic evacuation guidelines are: leave the building immediately, do not use elevators, and once out of the building, regroup with your instructor. Do not re-enter the building until administrative personnel indicate the building is safe to re-enter.

The following safety rules are crucial to prevent students from the sad consequences of accidents. These consequences may include loss of sight, severe skin burns, poisoning, and death. You must wear safety goggles at all times when you are in the laboratory and especially when performing an experiment. You must wear the goggles on your eyes, not wrapped around your head or neck. Contact lenses are strongly recommended against, even under goggles.

You will not be allowed to perform the experiment if you come to the lab improperly dressed. Proper clothing means:

- Close toed shoes. NO sandals, flip flops, etc.
- Long pants or skirts
- Long sleeved shirts are recommended. Short sleeves are okay. NO tank-tops, crop-tops, or sleeveless tops.

These further guidelines are to protect you from spills that happen frequently:

- No clothing that is loose or unbuttoned. Loose fabric can catch on fire or knock down bottles.
- Long hair must be tied back. It can easily catch on fire or be dipped in chemical solutions.
- Food and Drinks are not allowed in the lab. They can be easily contaminated with chemical dust or vapors.

Students who refuse to abide by the rules will be asked to leave the lab.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Roll Call Attendance	Assignment	100
	Thin-Layer Chromatography Discussion	Discussion	0
8/23	Welcome and Introduction	Discussion	2
8/29	Safety Agreement	Assignment	3
8/30	Safety Quiz - SI 280	Quiz	5
8/30	Syllabus Quiz	Quiz	3

9/4	Measure and Transfer Chemicals - Prelab	Quiz	3
9/6	Measure and Transfer Chemicals - Data Sheet	Assignment	6
9/6	Measure and Transfer Chemicals - Postlab	Quiz	3
9/11	Density of Matter - Prelab	Quiz	3
9/13	Density of Matter - Data Sheet	Assignment	6
9/13	Density of Matter - Postlab	Quiz	3
9/18	Physical and Chemical Changes - Prelab	Quiz	3
9/20	Physical and Chemical Changes - Postlab	Quiz	3
9/20	Physical and Chemical Changes - Data Sheet	Assignment	6
9/25	Lewis Structures - Prelab	Quiz	3
9/27	Lewis Structures - Data Sheet	Assignment	6
9/27	Lewis Structures - Postlab	Quiz	3

10/2	Properties of Oxygen - Prelab	Quiz	3
10/4	Properties of Oxygen - Data Sheet	Assignment	6
10/4	Properties of Oxygen - Postlab	Quiz	3
10/9	Double Displacement Reactions - Prelab	Quiz	3
10/11	Double Displacement Reactions - Data Sheet	Assignment	6
10/11	Double Displacement Reactions - Postlab	Quiz	3
10/16	Reaction of Zinc and Iodine - Prelab	Quiz	3
10/18	Reaction of Zinc and Iodine - Data Sheet (Virtual)	Assignment	6
10/18	Reaction of Zinc and Iodine - Postlab	Quiz	3
10/23	Heat of Reaction - Prelab	Quiz	3
10/25	Heat of Reaction - Data Sheet	Assignment	6
10/25	Heat of Reaction - Postlab	Quiz	3
10/30	Chemical Equilibria - Prelab	Quiz	3

11/1	Chemical Equilibria - Data Sheet	Assignment	6
11/1	Chemical Equilibria - Postlab	Quiz	3
11/6	Iron Metal in Total Cereal - Prelab	Quiz	3
11/8	Iron Metal in Total Cereal - Data Sheet	Assignment	6
11/8	Iron Metal in Total Cereal - Postlab	Quiz	3
11/13	Determining the Molarity of NaOH solution - Data Sheet	Assignment	6
11/15	Determining the Molarity of an NaOH Solution - Postlab	Quiz	3
11/15	Determining the Molarity of NaOH Solution - Prelab	Quiz	3
11/20	pH, Acids, and Bases - Prelab	Quiz	3
11/22	pH, Acids, and Bases Data Sheet	Assignment	6
11/22	pH, Acids, and Bases Postlab	Quiz	3

Brief Description of Assignments/Exams

As this course is teaching and assessing your skills with hands-on procedures, you must be present and engaged to receive points for lab coursework. If you are unable to attend a

regularly scheduled lab due to illness, unavoidable business trip or a major life trauma you must notify your instructor ASAP.

All other 1115 labs are available for students to attend if they must miss a lab. However, you must attend the same lab and not all sections are on the same schedule; it varies by day the lab is taught. The Chemistry 1115 lab schedule for the semester can be found posted on the lab door: your best option when you know you will miss a lab is to use it to arrange for a make-up of the same lab you are missing.

Your grade for each lab includes the pre-lab work, the post-lab work, and the data/calculation sheet where you include the observations you made for the work in class.

Pre-lab work is due the night before the lab period starts, and the completed data sheet and post-lab questions are due the day after the lab. You can see the dates on the Canvas calendar. Late work may be subject to points penalties. Please reach out to your instructor if you will not be able to be prepared for the lab class on time.

Extra credit may be given at different points throughout the semester. Pay attention in Lab so you know what/when these are!

Grading Scale

Your final grade is based on the following percentages:

≥ 93.00% A

≥ 90 and < 93 A-

87 and < 90 B+

≥ 83 and < 87 B

≥ 80 and < 83 B-

77 and < 80 C+

≥ 73 and < 77 C

≥ 70 and < 73 C-

67 and < 70 D+

≥ 63 and < 67 D

≥ 60 and < 63 D-

< 60 E

Institutional Policies

Please review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

You can access the document by clicking on the following link:

<https://slcc.instructure.com/courses/530981/pages/institutional-syllabus>

Learning Support and Tutoring Services

SLCC is pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services offered and how to access them, please visit the Institutional Syllabus under the Tutoring and Learning Support tab:

<https://slcc.instructure.com/courses/530981/pages/institutional-syllabus>. You are encouraged to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out. Tutoring and Learning Support services are here to support you in any way possible.

Advising and Counseling Support Services

The college offers a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: <https://slcc.instructure.com/courses/530981/pages/institutionalsyllabus>. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)