CHEMISTRY 102 (General Chemistry II) Summer 2025

Professor: Kamran Golestaneh

CLASS/SECTION	LECTURE TIME, (LOCATION)
102-35 (1734) Lec	Lecture: MTWTh 11:30-1:35 pm (SG137)
102-36 (1735) Lab	Lab: MTWTh 2:00-6:15 pm (BV402)

Prof. Golestaneh will be issuing your course grade based on your lecture and lab performance.
Both Lecture and lab performance are included in your Canvas lecture course since the your professor will be teaching both lecture and lab sections. All work except for exams (in-person) is be turned in through Canvas for grading. It is important for you to have access to a reliable computer and internet. You can use campus computer rooms.

Email: kgolesta@glendale.edu (Use this email for primary means of off-campus communication that is not time sensitive!) Instructor is not responsible to provide time sensitive information that you may miss through your absence or lack of attention to course deadlines).

Check important dates (dates to drop with or without "W") from college administration! It is your responsibility to drop the course in a timely manner if you decide to do so.

Office hours: & Location (SG137 – Lecture room)

Office meeting is by appointment. I am generally available in SG137 at least 30 minutes before lecture. If you like to meet earlier, send me an email and confirm a time between 10:30-11:00 am to meet in SG137.

DETAILED COURSE RULES, POLICY & INFORMATION

102
GENERAL CHEMISTRY
5.0 Units

CHEM 102 is the second course in a two-semester sequence which covers important chemistry concepts including physical properties of matter, chemical reactions, stoichiometry, electronic structure of atoms, quantum mechanics, chemical bonding, and the three phases of matter. Lecture and laboratory activities are integrated into one cohesive lecture-lab section. The latter part of the course covers solution chemistry with emphasis on chemical kinetics, thermodynamics, and electrochemistry. Laboratory activities supports the above-mentioned topics, including both qualitative and quantitative analysis of data and propagation of errors. Lecture 3 hours/Laboratory 6 hours. *Prerequisite:* CHEM 101. *Transfer Credit: CSU, UC, USC (C-ID CHEM 120S)*

Course Description

https://www.glendale.edu/academics/academic-divisions/physical-science-division/chemistry/program-courses

Student Learning Outcomes (short summary!):

1. Analyze and evaluate the properties and energetics of solutions as well as the quantitative description of solutes dissolved in aqueous media.
2. Evaluate the theories of bonding for coordination compounds.
3. Analyze and evaluate the laws of reaction kinetics for irreversible and reversible reactions, including reactions occurring in aqueous media, (and in nuclear reactions).
4. Analyze and Evaluate chemical equilibrium in aqueous solutions.
5. Examine the laws of thermodynamics to predict the spontaneity of chemical processes, including electrochemical processes.
6. Formulate conclusions according to scientific inquiry by collecting and interpreting gravimetric, volumetric, and spectroscopic chemical data.
7. Justify the identity of unknown cations and anions using experimental evidence from qualitative analysis, the scientific method, and chemical reasoning.
8. Compose laboratory reports that illustrate meaningful conclusions based on and supported by data and observations.

Required!

- Textbook: OpenStax Chemistry 2e (free pdf textbook: https://openstax.org/details/books/chemistry-2e). Download a digital copy into your laptop, PC or smartphone for reference. This book is only a reference text and your homework is posted on the website out of a different source. You should give the highest priority to the homework listed on professor's website: www.chemvision.net

- Required: AI (ChatGPT) subscription. Currently this is $20. Per month. ChatGPT can be accessed for free but the free version is limited for what you would use it for in this course. You can discontinue your membership at the end of the course.
- You should have means of scanning your work to be turned in, converting the file to pdf format and submitting it through Canvas. Pdf Files that are not submitted as 1 (one) file in pdf format will not be accepted for grading. You can use your smartphone to take pictures of each page of your work to be submitted. Download a pdf maker app in your phone which allows for converting individual pictures to one (1) pdf file for Canvas submission. Multiple files are not acceptable for grading. Please do not attach files to email or Canvas comments.
- Access to a computer with a reliable high-speed internet connection in necessary. A laptop is highly recommended. Use Google Chrome as a browser that is compatible with Canvas.
- Lab coat and goggles are required for the lab. Open-toe sandals are not allowed.
- Access to a printer is necessary. You may be able to print in one of the student computer labs.
- Scientific Calculator (Do not program for text or formulas!)

Grading

4 Exams (13 % each)	52.0%	No make-up exams!
Final exam	13.0%	Cumulative and administered on the scheduled final exam day
Homework	6.0%	Graded as 2, 1 or 0 (unacceptable!)
Quizzes	5.0%	All quizzes must be accessed and taken on Canvas as scheduled.
All Attendance	1.0%	Students are expected to arrive at the scheduled course times.
Total Lecture ----------	77.0%	
Laboratory ----------	23.0%	
Total ----------	100.0%	

Note: Students who earn a lab grade of D or lower (<=64.9%), will not pass this course even if they earn a passing grade on the account of their lecture performance!

A letter grade will be assigned according to the following breakdown:

A:100.-88.0%	B:87.9-78.0%	C:77.9-68.0%	D:67.9-53.0%	F:52.9-0%

(If your grade is 0.1-0.2% away from the next letter grade), You may receive the higher letter grade at the discretion of your instructor only.

Success Tips for this course!

1. *Do your homework diligently! Learn from your homework experience! Check your answers!*
2. *There is a strong grade correlation between the quality of your homework and course grade!*
3. *Ask questions!*
4. *Be present! Don' t miss class! Don't stare at or use your phone during lecture and lab! Paty attention to what is going on in class. Be on-time for lecture and lab sessions.*
5. *DO NOT talk to other students during class when instructor is lecturing! Take notes from lectures. Review the PowerPoint presentations after class. You may need to read chapter contents from your reference textbook or other resources (ex. YouTube videos) if a topic is not clear to you.*

NOTE: Your ability to follow instructions is very important in this course. You can lose 20% or more points deducted from any assigned work for being late or not following any formal instructions. Check your course grade on Canvas on a regular basis!

Note: It is your responsibility to save all your graded work and check your posted grades regularly. Notify the instructor in case of a discrepancy within one week of grade posting through email.

Special Testing Accommodations, Medical Conditions and Disabilities

Note: If you have a medical condition or a disability which may prevent you from compliance with the course rules, you must indicate that in writing to the instructor and see a designated college counselor as soon as possible. Special accommodations for these students

are available if they are registered with the proper campus accommodation center and approved for these accommodations and services.

Attendance Policy

Being habitually late (even for a few minutes) to a class is considered disruptive behavior and you may be dismissed from lecture or lab. You must email notify the instructor in case of your absence due to an emergency immediately and provide any supportive paperwork as soon as possible (ex. doctor's note). You are subject to being dropped from the course at any time prior to the "W" deadline for the following unexcused number of absences:

- If you miss 3 consecutive class sessions or 4 hours after the first week.
- If you miss a significant portion of the course which means more than 4 consecutive lecture and lab sessions during a regular semester, or more than 4 consecutive instruction days during a short session (summer or winter) for any reason, even if beyond your control.
- If you are late to or leave early from 3 consecutive class sessions.

Furthermore, please refer to the summary of important lab rules (lab information and policy) for lab-related attendance issues. Regular and timely attendance counts toward your course grade (refer to attendance grade breakdown). Any unsupported cases of being absent, late or early departure from lectures will drop your attendance grade to 0%. **Students who are frequently late may not be allowed in class**. Students who engage in disruptive behavior (ex. talking or cell-phone use during class sessions) will be dismissed from the class which will result in a 0% attendance grade. If you happen to miss class for any reason, you may also miss important and time-sensitive information that may negatively impact your course grade. Therefore, timely attendance is very critical in this course. **If you happen to miss class, email the instructor immediately and explain your reason for being absent**. You are responsible for the information missed during your absence. If you have any intentions of dropping the course you must do so as soon as possible and prior to the "W" deadline. If you stop attending class before the "W" deadline, you may receive a failing grade for the course. It is both highly recommended, and your responsibility to drop the course. However, the instructor can drop you for absences (without email communication) or non-compliance with course rules. All instructor communications shall be through email and in a timely manner.

Homework Assignments

All homework must be turned in in through Canvas as 1 pdf file. All work must be your own work! No portion of your work should be copied from a different source (solution manual, internet resources, classmate, etc.) otherwise you will not learn from your homework experience and risk getting a zero for the assignment. **All grading in this category is based on pass(2), Incomplete (1) or unacceptable(0). If students complete more than 70-80% of the assigned homework they get a passing grade. No Late work in this category is accepted! No Exceptions! Homework must be submitted through Canvas prior to the due date.**

> *The homework problem set table on the course web page (chemvision.net) lists your homework problems for each chapter. Each line of assignment correlates to one lecture period and should be attempted after the lecture. Problem sets with disorganized, messy work will not receive any grade.*

Examinations

All cell phones and smart watches should silenced, away from your reach and inside your backpack during exams and exam review sessions, otherwise your exam will not be considered valid for grading (a grade of zero) for the exam. Exams are administered according to the latest revised version of the course schedule posted on Chemvision.net. ***Exams are intended for your instructor's evaluation purposes, and are kept by the instructor during the semester/session and it will be destroyed after the semester/session.*** All work must be shown on your exam papers. **Students who do not show work may be denied credit even if the answer is marked correctly on the bubble sheet. A short interview with the student will be conducted to establish alternative means of reasoning before denying credit**.

Your final exam is cumulative. **All exams will be closed book and notes.** You will be provided with appropriate reference materials (an equation sheet, etc.) including a periodic table and a list of conversion factors and constants. You will also need a scientific calculator with log and exponential (scientific) notation but other electronic devices including **cell phones will not be allowed during exams even if used as a calculator. You may not share calculators during an exam**. **No make-up exams will be offered.** It is ultimately to your advantage to prepare for and participate in every exam session. **Students who miss one exam due to a valid and substantiated reason (ex. medical emergencies, car accidents) have the option to use the average of their other midterm exams (not the final exam) for the missed midterm exam. If more than one exam is missed, the final exam score will be substituted for one missed exam and the other missed exam(s) will receive a score of zero.** Smart phones, smart watches, recording devices and electronic dictionaries are not allowed during a test and should be kept away from the student in their backpack. All backpacks must be placed on the floor or backpack cabinets in the laboratory entrance. **Use restrooms prior to taking the exam**. **Students are not to leave the classroom during an exam session for any reason until the exam is turned in unless there is a medical condition and it is clearly communicated to the instructor before the exam**. **Students who are more than 30 minutes late into an exam session are not allowed to take the exam**

resulting in a grade of zero for the exam. If a student leaves an exam session without turning in their exam papers, they will get a zero(0) grade for the exam. Each student's face should be fully visible during an examination period. (ex. no baseball caps). **All exam grade disputes should be brought to the instructor's attention immediately after the exam review session. All grade disputes should be requested in writing (request through email) and state the issue(s) you are having with your graded exam. If after taking your exam your instructor suspects that your exam score does not reflect your knowledge level, your instructor can initiate a process of validating your exam score. Fr example, this process can be initiated when a student gets numerical (calculation-based) exam questions correct without writing any of the steps down on a scratch paper (that must be turned in with your name on it) or on the space next to the question. Blank exams (without your work shown) that receive a passing score are suspected and will be investigated. If the student fails to show evidence of learning (ex. oral interview), an exam score of zero will be recorded.**

Problem Solving and Grading

All logical steps must be shown for all calculation type of problems to receive credit for correct steps. Box your reported answer(s). All answers should include proper units and significant figures for complete credit. Use pencil for problem solving and show your work in a neat and logical manner to receive credit. If your instructor has a difficult time following your problem-solving logic and/or your work appears messy and disorganized, you may not receive any partial credit. During quizzes and exams, If you are partially correct in setting up a problem, you can get some partial credit (50% or less). Typically for a multi-point problem, mistakes in significant figures, incorrect or missing units as well as round off errors will cost you a one-time deduction of -0.5 points for each numerical problem. Please note that you will not receive any credit if you place a correct answer without showing steps (in a clear and logical manner) leading to the answer. Also, note that if there is reason to believe that the work presented by you (exams, lab reports, etc.) is not yours, instructor reserves the right to conduct an oral interview with you and determine if the work presented is yours and you should earn any credit for it. A voice record of this type of interview will be recorded and saved. If you do not consent to the meeting/recording, you will likely get a zero for the work presented.

Extra Credit or Not!

Please note that there will not be any extra credit assignments during or at the end of the semester to boost an undesired or anticipated final course grade. Likewise, a grade will not be raised just because you wanted or needed a higher one. Please do not even ask! It is your responsibility as college students to keep up with the material as we go along, to do all required assignments, and to get help when you need it.

Academic Integrity & Courtesy & other important Policies

- **No form of cheating is tolerated in this course! All cheating incidents will be dealt with seriously with a report provided to student services.**
- **Cheating by copying someone else's work is a serious offense that can ruin your academic record and career. You are not to show or loan your work (homework, exams, lab reports, etc.) to anyone other than your instructor. If another student asks to see your work, do not share the work. If someone copies your work word by word both parties involved will get a zero for the work.**
- **Refer to the college catalog for important policies such as student misconduct, plagiarism and cheating. Any form of cheating and plagiarism will lead to a report of the incident with the college administration.**

The following student misconduct incidents can cause the instructor to expel you from 1 or more class session as well getting no credit (zero) for the work. Examples of student misconduct include (but not limited to):

a) Cell phones on your desk, clothes pockets or your lap. Cell phones are expected to be away from you in your backpack in silence mode.
b) Glancing at or looking over someone else's exam papers (with or without copying their work).
c) Using any text, voice or picture recording devices to record exam contents.
d) Copying another student's lab report or providing lab information to another student in class.
e) Copying another student's lab data unless authorized by the instructor in writing or email.
f) Receiving any information regarding exam contents in any form (email, etc.) and not informing your instructor about the incident.
g) Communicating test and quiz contents with another student of your class or any other class.
h) Any form of copying (if authorized to do so) and without listing the source is an act of plagiarism and punishable.
i) Having someone else take the course or any form of assessments (on-line or in-class) for you.

What are some of the common types of disruptive behavior that will cause you to be dismissed from the lecture or lab:

- Violating safety rules in the laboratory
- Insulting a classmate or your instructor
- Talking to another classmate during lectures
- Socializing with other students in lecture and lab discussing matters unrelated to the course
- Not wearing your safety goggles in the laboratory

- Making fun of or disrespecting another student
- Socializing in the lab over topics which are not directly related to your lab work or communicating with a noise level that can distract other people and/or instructor's focus
- Using a phone to send, receive or read any text messages during class sessions
- Fooling around, clowning or horseplay during lab or lectures
- Being frequently late for a lecture session. If you happen to be late once enter quietly from the far-side door and sit in the back of the class
- Disrespecting your instructor or using a foul language to communicate.
- Habitually coming to class unprepared without having your textbook, calculator and Chemistry and lab notebook
- Sleeping during lectures
- Refusing to follow course-related instructions given by your instructor

Please refer to the current schedule of classes to check important semester dates including deadlines for dropping a course with and without a "W" on your record.

Important!

This detailed course rules, policy and information serves as "binding contract" between you, the student, and course instructor. If you disagree with any part of this contract you should email your instructor and express the matter(s) in writing as early as the first week of the semester and get the instructor's approval to remain in the course in writing. Ultimately, if you stay with this course past the first week of instructions, you are expected to abide by these rules.

LABORATORY RULES, POLICY AND INFORMATION

Bring this handout to the First Lab Session!

CLASS/SECTION	LECTURE TIME, (LOCATION)
102-35 (1734) Lec	Lecture: MTWTh 11:30-1:35 pm (SG137)
102-36 (1735) Lab	Lab: MTWTh 2:00-6:15 pm (BV402)

Required Materials

- Lab Manual: All experiment files are posted on Canvas. Download and print each experiment and bring a copy to the lab.
- Lab coats and goggles are required. Open toe sandals are not allowed!

Laboratory Grading:

Total Laboratory ---------- 23.0% (Breakdown as shown)

Lab Reports & Unknowns	10.0%
Lab Tests* (2)	10.0% (Based on each experiment's concepts, calculations, procedures)
Prelab assignments	2.0%
Lab Notebooks	1.0% (Checked and subjectively graded by your instructor)

Note: *Students who fail the lab, (D or lower), will not pass the course even if they earn a passing grade on the account of their lecture performance!*

* Lab tests cover all laboratory activities (concepts, skills, problem-solving) related to experiments and reports. Lab tests are also related to lecture concepts. *Review the instructor's lecture notes as well as your experiment, lab report, questions, problems, procedures and chemical reactions. Take complete notes during lab lectures!*

Summary of Important Lab rules:

1. If you are more than 10 minutes late to the lab without any documented and legitimate excuse, you will be turned away with a grade of zero for the experiment.
2. You are required to attend the lab section in which you are enrolled.
3. You are subject to being dropped from the course (prior to the "W" deadline) if you miss a considerable portion of the total course lab time (more than 20%) for any reason even if excused due to doctor's note. Excused absences below the 20% limit will cause your overall lab report grade to exclude your missed reports. However, you are responsible for doing the pre-laboratory assignments or lab tests that cover the missed lab content.
4. There are NO LAB MAKE-UPS, NO EXCEPTIONS.
5. All experiments will be performed individually unless otherwise noted. If you are instructed to work with a lab partner, you either choose your lab partner or be assigned to a partner selected by your instructor.
6. You are encouraged to discuss your observations and conclusions with your classmates during the lab.
7. When working with a laboratory partner, each student must record his or her own data in their lab notebook and turn in an individual lab Report written in your own words. If you fail to record your lab data in your lab notebook (or you forget to bring your notebook to lab), your report grade will be deducted by 10%.
8. DO NOT share your lab data and written report to anyone including your lab partner. Turning in a lab report containing the same wording with or without your acknowledgment is considered cheating and will result in a zero grade for all parties involved.
9. Lab reports are due by the midnight of the next school day after completion of an experiment. Late reports are due no later than 2 school days after completion of the experiment at a late penalty of 20%. Reports beyond a 2-day late period will not be accepted.
10. Report format for each experiment will be provided in the lab and/or posted in Canvas..

Desirable Behavior in Lab	Undesirable! (Lab skills grade deduction)
11. Practicing safe lab techniques	Unsafe practices (may also be dismissed from lab)
12. Being aware of your surroundings in safety and proper waste management practices.	Not knowing what is going on around you or how others handle waste and chemicals
13. Taking active part in doing the lab	Watching others do the experiment
14. Performing correct laboratory techniques	Showing poor lab techniques
15. Focusing on the experiment	Being confused or socialize with others
16. Keeping your work area clean	Leaving waste papers and chemicals on your bench
17. Working with optimum speed	Working to fast or too slow (Poor time management)
18. Taking care of your lab equipment	Losing or breaking any lab equipment
19. Conservative use of chemicals	Taking too much of a chemical and wasting.

Additional Rules which will impact your laboratory grade. Your lab report grade is likely to be impacted by these incidents.

1. If a student is late more than 10 minutes of lab session, he or she will not be permitted to do the lab due to safety reasons. This will result in a zero lab grade for the report or a significant reduction in the report's grade if the experiment extends over multiple lab sessions.
2. If a student is absent to a lab session they should not be asking for lab data from another student. This is considered plagiarism and all students involved will not get any credit for their lab report!
3. Late Reports (even if late for a few minutes) lose 20% credit, if turned in late on the same day the report is due and marked down 20% for each additional day passed the due date.
4. Raw data (data recorded from a measuring instrument or your laboratory observation) must be recorded in permanent ink. Do not obliterate your incorrect (presumed) laboratory data. Draw a single line over the "wrong" data and write the correction above or below the old data.
5. Students who miss a lab for a valid reason must provide the instructor with official paperwork as soon as they return to school.
6. Each student should read the entire experiment and be prepared before the start of the experiment. When applicable, students who do not complete their lab notebook prior to the lab may not start their experiment before completing their notebook. If they run out of time to do the lab, a grade of zero(0) will be issued for that lab.
7. Students must clean up their work area with a wet towel before leaving the lab. Sinks should be kept free of matches, paper towel or broken glass. All groups working near a dirty sink will lose lab grade. Physical objects (matches, broken glass, etc.) should never be disposed down the drain).
8. Students must return their cleaned glassware back into their drawers before leaving the lab. Those who leave behind their lab equipment and glassware on the lab benches will lose lab points.
9. Students should conserve their use of chemicals and any unknown chemical issued by the instructor.
10. Get your instructor's initial on your lab data before leaving the lab.
11. If a student does not record data during the experiment and relies on a partner to copy their lab data, such data will not be valid.
12. It is each student's responsibility to finish the assigned experiments in a timely manner. Students who do not finish their experiment, will not be given additional lab time beyond the scheduled lab activity.
13. Students are not allowed to leave the laboratory without notifying the instructor for any reason other than checking out equipment from the stockroom. Notify the instructor upon your arrival to the lab.
14. Treat the stockroom personnel with respect when you deal with them. If you experience any problems, notify the instructor immediately and let your instructor resolve any issues.

It is very essential that you have a safe Chemistry Laboratory experience. To do so, all students must adhere to the following rules:

- Safety goggles, that provide a complete, snug seal around the eyes, must be worn in the laboratory at all times.
- Students should come to the lab properly attired. This means wearing closed-toe shoes that cover the entire foot, tying long hair back, and removing dangling jewelry. Avoid loose fitting clothing, bulky sweaters, synthetic

fabrics (due to flammability concerns), and clothing that expose bare skin such as mid-drifts, short skirts or short shorts.

- Eating or drinking in the laboratory is not allowed in the lab areas. Avoid skin contact with chemicals. While in lab, avoid touching your face (eyes, mouth and nose). At no time should students taste chemicals and, absolutely no pipetting by mouth. Remember to always wash your hands when you leave the lab.
- Avoid trip hazards. That means keeping your book bags, sweaters or other personal off the floor and out of the walkways and storing them in the cubbies where provided. Make sure that locker drawers are kept closed when not in use.
- When conducting laboratory activities, be sure to carefully read labels on all reagent bottles, notify your instructor of all accidents no matter how small, and report and clean-up all chemical spills. Do not pour excess chemicals back into the reagent bottles. Never perform unauthorized experiments.
- Good housekeeping is part of safety and good laboratory practices. This includes keeping your immediate area clean and clutter free, avoiding drips, drizzles and spills when transferring liquid chemicals, and maintaining a professional attitude. Dispose of chemical wastes, broken glass, and paper towels in appropriate containers.
- Take extra precaution when using glassware and heat. When heating test tubes, be careful not to point the test tube at yourself or another student. Protect your hands with paper towels and use lubrication when inserting thermometers and tubing into stoppers.
- Lastly, as part of good safety practice, all students must know the location of safety items such as the safety shower, eye wash stations, first aid kit, fire extinguishers, material data safety sheet (MSDS), chemical-spill kits, and exits. In addition, students should know proper procedures for using the safety shower and eye wash station, and know what to do in case of an accident.

Students must also follow these laboratory safety procedures and rules! Students who refuse to follow these rules are prevented from doing any lab work with a grade of zero for the lab activity. Keep this page for your records

1. **Approved and proper safety goggles as well as lab coats must be worn at all times while being present in the laboratory. Students who refuse to wear safety goggles are dismissed from the laboratory (after 2 warnings) and considered absent from the activity. Do not wear cosmetic or prescription contact lenses in the lab.**
2. **Students must wear a lab coat and come to lab with pants and sturdy shoes (no shorts or sandals!)**
3. **If you have a special medical condition** that prevents you from following any of these instructions or requires special care during a medical emergency, **notify your instructor** as soon as possible and provide a doctor's note to your instructor.
4. **Report any personal injury** immediately to your lab instructor. You are required to fill out an accident report.
5. **KEEP yourself safe** in the lab. Students with **long hair** should tie back their hair in order to avoid chemical and fire exposure hazards. **DO NOT** wear sandals to the lab. Wear closed-toe shoes.
6. Each student is responsible to know the location of **emergency equipment** such as the emergency shower/eye wash station, fire blanket and fire extinguisher. Ask you instructor or lab technicians if you are not sure. In case a of eye contact, rinse your eyes for a minimum of 15 minutes with water.
7. **DO NOT** remove any chemicals from the **laboratory fume hood**. These chemicals must be dispensed and processed under the laboratory fume hood.
8. **In case of an earthquake** do NOT panic and run. Keep calm and stay in a safe location. Evacuate the laboratory only if it is safer to be outside the laboratory than inside.
9. **In case of a laboratory fire, activate the fire alarm** and use emergency exits to evacuate the laboratory/building. All students should remain on-campus and immediately report to the nearest and safest area outside the classroom and wait for proper instructions from the fire department personnel or the campus-assigned building marshal(s).
10. **No Food or drinks** are allowed near the laboratory benches. Keep all food and water sealed in your backpack.
11. **Unauthorized persons** such as children and non-enrolled students should not be present in the laboratory. If you have to leave the lab for any reason, **notify the instructor** upon leaving and arrival.
12. **Dispose** of all chemical waste in properly labeled waste containers. Careless waste disposal practices (overfilling a waste container, filling a waste container with a a wrong waste, etc.) are not permitted and the student will be

immediately dismissed from the laboratory. Check with your instructor if you are not sure to find the proper waste container.

13. **If you are** pregnant or planning a pregnancy during the semester, ask for a list of chemicals you may be exposed in the laboratory.
14. **DO NOT** perform an experiment that is not scheduled as the lab activity. If you do not have your own written procedures for a lab experiment you can not do the lab.
15. **DO NOT** joke or play around in any form with others in the lab.
16. **DO NOT** touch, taste or smell any chemicals. If you accidentally get some chemicals on your skin, wash your hands immediately with tap water. Wash your hands regularly in the lab.
17. **Know** the location of tap and pure water, also known as distilled or deionized (DI) water.
18. **KEEP** lab balances clean and let the instructor know if you find them dirty with chemicals.
19. **DO NOT** take more than what you can use of a chemical. Never return unused chemicals to the original bottle to avoid the risk of contamination.
20. **If you spill** any chemicals immediately notify your instructor and your lab technician.
21. **If you break a mercury thermometer**, everyone must evacuate the lab. Notify the instructor immediately. You may get a zero grade for that lab.
22. **If you break glassware**, notify the instructor. Do not place any broken glass in trash cans. Place all broken glass in special broken glass containers.
23. **After you finish working with a gas burner**, be sure the main gas valve is properly turned off.

Note: Keep the above copy for your reference and sign and turn in the duplicate copy included in this packet.

Read and Sign this Copy and Turn it in through Canvas!

Every student **must** follow these laboratory safety procedures and rules!

1) **Approved and proper safety goggles** as well as lab coats must be worn at all times while being present in the laboratory. Students who refuse to wear safety goggles are dismissed from the laboratory (after 2 warnings) and considered absent from the activity. Do not wear cosmetic or prescription contact lenses in the lab.
2) **Students must wear a lab coat and come to lab with pants and sturdy shoes (no shorts or sandals!)**
3) **If you have a special medical condition** that prevents you from following any of these instructions or requires special care during a medical emergency, **notify your instructor** as soon as possible and provide a doctor's note to your instructor.
4) **Report any personal injury** immediately to your lab instructor. You are required to fill out an accident report.
5) **KEEP yourself safe** in the lab. Students with **long hair** should tie back their hair in order to avoid chemical and fire exposure hazards. **DO NOT** wear sandals to the lab. Wear closed-toe shoes.
6) Each student is responsible to know the location of **emergency equipment** such as the emergency shower/eye wash station, fire blanket and fire extinguisher. Ask you instructor or lab technicians if you are not sure. In case chemical eye contact, rinse your eyes for a minimum of 15 minutes with water.
7) **DO NOT** remove any chemicals from the **laboratory fume hood**. These chemicals must be dispensed and processed under the laboratory fume hood.
8) **In case of an earthquake** do NOT panic and run. Keep calm and stay in a safe location. Evacuate the laboratory only if it is safer to be outside the laboratory than inside.
9) **In case of a laboratory fire, activate the fire alarm** and use emergency exits to evacuate the laboratory/building. All students should remain on-campus and immediately report to the nearest and safest area outside the classroom and wait for proper instructions from the fire department personnel or the campus-assigned building marshal(s).
10) **No Food or drinks** (and water) are allowed near the laboratory benches. Keep all food and water sealed in your backpack.
11) **Unauthorized persons** such as children and non-enrolled students should not be present in the laboratory. If you have to leave the lab for any reason, **notify the instructor** upon leaving and arrival.
12) **Dispose** of all chemical waste in properly labeled waste containers. Careless waste disposal practices (overfilling a waste container, filling a waste container with a a wrong waste, etc.) are not permitted and the student will be immediately dismissed from the laboratory. Check with your instructor if you are not sure to find the proper waste container.
13) **If you are** pregnant or planning a pregnancy during the semester, ask for a list of chemicals you may be exposed in the laboratory.
14) **DO NOT** perform an experiment that is not scheduled as the lab activity.
15) **DO NOT** joke or play around in any form with others in the lab.
16) **DO NOT** touch, taste or smell any chemicals. If you accidentally get some chemicals on your skin, wash your hands immediately with tap water. Wash your hands regularly in the lab.
17) Know the location of tap and pure water, also known as distilled or deionized (DI) water.
18) **KEEP** lab balances clean and let the instructor know if you find them dirty with chemicals.
19) **DO NOT** take more than what you can use of a chemical. Never return unused chemicals to the original bottle to avoid the risk of contamination.
20) **If you spill** any chemicals immediately notify your instructor and your lab technician.
21) **If you break a mercury thermometer**, everyone must evacuate the lab. Notify the instructor immediately.
22) **If you break glassware**, notify the instructor. Do not place any broken glass in trash cans. Place all broken glass in special broken glass containers.
23) **After you finish working with a gas burner**, be sure the main gas valve is properly turned off.

Signature: _____ Print name: _____ Date:_____