

CHEM 25 Syllabus

Instructor: Rose Wang Lecture: MW 5:30 – 7:20 pm in Room S 32 Lab: M 7:30 – 10:20 pm in Room SC 2208 Office Hours: 1) MW 5:05 – 5:30 pm in Room S 32 2) W 7:20 pm – 8:10 pm in Room SC 1206 or S 32 (If no one needs my help in S32 on W, I may go to faculty office room SC 1206)	Email: wangxiao@fhda.edu & wang932@yahoo.com Email is reserved for contacting me regarding absences, scheduling, etc. not for office hours. Office: I do office hour in S32 and S1206 Course Website: Section 61: https://deanza.instructure.com/courses/31927
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This syllabus is a contract, please read it carefully.

♦ **CAREFULLY** read the attached DeAnza Chemistry Department laboratory policies and safety and housekeeping rules.

♦ **You will not be allowed to attend lab until you finish the safety training module (Module 1 in Canvas) during the first week and get the certificate, and upload the certificate (15 pts)**

♦ **You must read department safety rules and house-keeping rules in module 1, then find the blank Signature sheet in Module 1, print it out, complete it, and submit it to Canvas during the first week (due on Sat. for 5 pts.)**

COURSE DESCRIPTION:

Chemistry 25 is meant to serve as an introduction to and grounding in the core theory and problem-solving techniques of chemistry as a preparation for a General Chemistry course (Chem. 1A) and other science related fields. Conceptual topics include modern atomic and molecular theory, the mole and stoichiometry, behavior of gases, thermochemistry, and an exploration of the standard classes of chemical reactions. Laboratory topics covered include an introduction to gravimetric and volumetric analysis, introductory lab equipment and techniques, and keeping a laboratory notebook. Throughout all topics we will stress both conceptual and mathematical problem-solving techniques in order to prepare students to tackle these topics more in depth in following classes.

PREREQUISITE: MATH 114A or equivalent

REQUIRED MATERIALS:

1. **Textbook: *Introduction to Chemistry, 5th edition* by Bauer, Birk, and Marks** (McGraw-Hill). Directions for obtaining the electronic version of this book are found in the **Getting Started** module. ISBN: 9781307601633 (\$30). You can also try to find a used version of the book on Amazon or any used book retailer.
2. **A scientific calculator** that has at least log and exponential functions is required (~ \$25). Graphing calculators could not be used during the exams, but could be used during the class and lab.
3. A lab notebook with pages numbered (you could number the page by yourself before you use the notebook. It means no tear any pages during the quarter! Also, you have to write prelab and record your lab results in notebook each time. And before you leave the lab, please let me sign it.)

4. **Aktiv Chem Subscription** (\$26.00)
5. **Lab Manual: Preparation for General Chemistry** laboratory manual listed for Chem 25. This is a custom lab manual that can only be purchased at the De Anza Bookstore. Make certain to buy the version listed for Chem. 25. Here is a [link](#):
<https://www.bkstr.com/deanzastore/product/preparation-for-general-chemistry-14770-1>
ISBN: 9781307817706 (\$43.25)
6. **Laboratory Safety Goggles** (\$25.99). These must be purchased from the De Anza bookstore to meet specifications required for chemical safety ((Indirect Vent, Z87). Here is a [link](#) to the goggles.
<https://www.bkstr.com/deanzastore/product/uvex-stealth-goggles-gray-gray-802632-1>

REGISTRATION AND DROPPING POLICY:

Registration: Enrollment in each section is strictly limited to 30 students per section. Class spaces are filled in accordance with the official class roster from Admission and Records, followed by the official wait list. Any errors with registration or status must be addressed directly to Admission and Records.

Dropping the Course: If you choose to drop the course **at any point** during the quarter, it is **your** responsibility to withdraw from the course through MyPortal by the appropriate deadline.

Students on the wait list may attend lecture and lab until the add deadline (10/8) - but could not attend wet labs (this quarter no wet lab before 10/8)

Students who are waiting to add need to be sure to attend the class and lab. When I have spaces, I add those students in the waitlist who attend the lectures and labs.

For any students do not attend the first day of class and lab, I am required by contract to drop you from the course, unless you inform me in writing as to why you were absent.

GRADING POLICIES:

Overall Course Grade

	pts	%	
3 Lecture Exams (3x100)	300	30	
Final	200	20	
Homework (8*13)	104	10.4	
Canvas Discussion (5x6)	30	3	
Pop Quizzes (5x16)	80	8	Drop the lowest one
Prelab (5x8)	40	4	<i>Drop the lowest one*</i>
Lab Report (15x8)	120	12	Drop the lowest one
Lab Exam	90	9	
ACS safety & Sig. Sheet	20	2	
Subjective lab & lecture	16	1.6	
	1000	100%	

**You must do all prelab to get access to the lab. But the lowest score will be dropped.*

A letter grade will be assigned according to the following percentage scale and categories:

A+ ≥97%	A ≥92%	A- ≥88%	B+ ≥86%	B ≥81%	B- ≥78%
C+ ≥75%	C ≥67%	D+ ≥64%	D ≥60%	D- ≥56%	F <56%

1. Precise cut-offs may differ by $\pm 1\%$ of the above listed numbers, and are determined only after all points for lecture and laboratory have been totaled.
2. **You must take the final exam to pass the course.** If you miss the final exam scheduled for this course, then you will not receive an overall passing grade. There are no make-up exams for the final exam.
3. **If your average lab percent is less than 55% you WILL NOT receive a passing grade.**
4. **If your average exam percent is less than 55% you may NOT receive a passing grade.**
5. **In order to be fair to all students, advance or make-up exams will NOT be given.**
6. A grade of F is also given for cheating or for being disruptive during the lectures or labs.
7. *In order to encourage you to do better, if your comprehensive final is higher than your lowest midterm %, I may consider using your final % to replace 50% of your lowest midterm to help you get more points 😊.*
8. **Incomplete grades** are only given for extenuating circumstances; for example, verified illness or legitimate emergencies. If an incomplete is given all exams and lab work prior to the incomplete are still counted in your grade, only material that has not yet been completed can be made-up in the future. **You must be passing the course to receive an incomplete grade.**

Many pop quizzes will be given during the quarter. Pop quizzes could be distributed at any time. Usually I may distribute the pop quizzes at the beginning of the class. **Pop quizzes are open book, open notes, and open discussions with limited time.** Pop quiz time is about 5 to 10 minutes. **You have to stay in the class all the time and solve the quiz questions correctly to get the full scores for pop quizzes.** Pop quizzes will help you to understand the materials just learned in lecture and lab, **also they will help students to have good participation in the class, thus to help you pass this difficult course with good grades.** **Besides 8% scheduled pop quiz scores, I'll distribute around 0.5% extra credits in pop quizzes.** Lowest pop quiz will be dropped during the quarter. I may distribute around 2.5 to 3% extra credit in exams as well.

Please note that the instructor will NOT provide extra credit work at the end of the semester for students who are doing poorly. Thus, you need to perform well in your tests, quizzes, and lab reports, etc. If you follow all rules, have good participation (means attend all lecture and lab, finish all prelabs, lab reports, assigned homework questions and discussions, etc.) and your score is within 1.0% lower than the cuts, I'll give those students 1.0% consideration when I assign the grades 😊.

ATTENDANCE:

This is a fast-paced and challenging course, attending the class and lab regularly will help you to understand the material and pass the class. Students are expected to attend all lectures and lab sessions. You are responsible for all the material covered in this course. You should also exchange contact information with a few classmates who you can contact regarding material missed if you must be absent. **Since this is an experimental course, your presence in the laboratory is essential for the understanding of the materials covered. Missed lab work WILL NOT be excused nor made up.** You may NOT receive a passing grade if **more than 1** unexcused lab absence is counted. Allowances may be made for emergencies. **Please show me the documents as the evidence of an emergency.** In order to help you to pass this difficult course, I will check the attendance regularly to help you stay with this difficult course. With good participation, the passing rate and students' grades would be higher. We will try to achieve good results as a whole group!

EXAMS AND IMPORTANT DATES:

There will be three midterms during the lecture times and a final. Also, we have ONE lab final. Please see all dates and times in the schedule on the second last page and/or in “Important Dates” section of syllabus. You need to bring a picture ID to all exams. Seats will be assigned during the lecture and lab exams and final. For all exams and final, please bring scantrons.

9/25 (Mon)	Class Begin
10/8 (Sun)	Last Day to drop for Refunds and without a grade. If you stop attending during this time I may drop you. But it is better you drop the class.
11/17 (Fri)	Last day to drop the class with a “W” grade. After midnight on this date, you CANNOT receive a “W”, you WILL receive a letter grade.

LECTURE AND LAB EXAM DATES:

Lecture Exam	Date/Time	Coverage***
Exam 1 (Week 4, Wed.)	10/18 during Lecture Time	Ch-1,2,3
Exam 2 (Week 7, Wed.)	11/8 during Lecture Time	Ch-4,5,6,7
Exam 3 (Week 10, Mon.)	11/27 during Lecture Time	Ch-8,9,10,11,12
Final Exam (Week 12, Mon.)	12/12 From 6:15 pm to 8:15 pm in Lecture Room	Comprehensive for all chapters we have learned (ch-1 to 14)
Lab Final (Week 11, Mon)	After check-out, in Lab Room	All Labs

***Note: Exact Chapter and Sections Coverage may vary depending on pacing of course ***

I reserves the right to change exam dates as well as modify the grade scale at any point during the quarter. In order to give students enough time to take the exam, I will assign seats before each exam, thus a reasonable extension of test time could be given.

HOMEWORK:

We will use Aktiv homework system. All of you need to buy Aktiv code to access it. **10.4% of your grade will be based on homework.** I will assign homework problems for each chapters (first several chapters are ready and other chapters are in progress). I am working on that, and I will provide questions chapter by chapter into module 2 in the canvas. *In Aktiv and Canvas, the due dates are already extended to the homework due dates to the exam dates (due times are around 4:40 pm of exam dates before the exams).* The lowest chapter of homework score will be dropped.

- Please do homework as soon as we cover the materials in class though the due dates are extended.
- Please also go over all examples in textbook and my pdf lecture notes.
- Keep in mind that if you do not work the problems it is difficult for a student to be successful in the course and exams.

ACDEMIC INTEGRITY:

By enrolling in classes at De Anza College, you are agreeing to the academic integrity policy and are held to all standards. Specifics can be found at <https://www.deanza.edu/studenthandbook/academic-integrity.html>.

Cheating during an exam/quiz or copying/using work other than your own for assignments will result in a 0 for the entire assignment, regardless of what percentage of the work is from cheating. Worse than a 0 on an exam, I am required to report such incidents to the disciplinary committee, who will make a note of the incident on your transcript, which then becomes visible to 4 year colleges upon reviewing your transfer application.

Academic dishonesty includes:

- Plagiarism (copying or allowing someone to copy) lab exercises or reports.
- During an exam, communicating or transferring information to another student, casual glances at your neighbor's paper, providing or receiving assistance, and/or consulting unauthorized materials. To avoid these, I will assign the seats. The main purpose to assigning seats is to give students more test times.
- Having another person complete and submit work in your name.
- Lying to an instructor to improve your grade.
- Altering a graded work after it has been returned and then submitting the work for regrading.

RESOURCES:

1. **Your peers!** It's been shown that working in groups is a GREAT way to process material. Helping others to learn is a wonderful way to solidify your own understanding. Asking each other questions, explaining difficult concepts and working together on the practice problems will all help immensely! I **HIGHLY** recommended forming some sort of study group – try to exchange contact information and meet for a bit each week to synthesize material.
2. **Tutoring:** De Anza's tutorial center is currently closed, but online services are available. Check at <https://www.deanza.edu/studentssuccess/onlinetutoring/>. Other campus services can be found as part of the student success center as well: <http://www.deanza.edu/studentssuccess>
3. **Disability Support Program and Services:** DSPS can help you get the right tools to succeed. Please check their website for current services and assistance: <http://www.deanza.edu/dsps/>
4. **Office Hours:** Come by to talk about lecture, homework, textbook material during the office hours. I put my office hour before lecture in lecture room and before lab in lab room to be sure that students could reach me easily.
5. **Textbook** – If you don't have textbook, please check if a copy of the textbook are on reserve at the library. But I recommend you to buy any version (early version would be cheaper) of used textbook, since the materials are similar, except homework question numbers may differ.
6. **Discussions in Canvas** – During the Covid time I opened discussions (with scores) for students during a quarter before each lecture exam. The past survey results showed that students like them. So I put 3% discussions in grade this quarter. Hope you will like them (discussions are in Canvas module 4 to 7.)

CLASS RULES AND REGULATIONS:

- Arrive on time. I will help you to be on time by distributing the pop quiz at the beginning of the lecture.
- Turn off or turn to silent mode all cell phones and electronic messaging devices. DO NOT talk on the phone or receive/transmit text messages during lecture or lab.
- Follow all written and verbal instructions.
- Laptop computers may be used during class ONLY for class business. For instance, you may use your laptop to view and/or take class notes, but please do not disrupt/distract your fellow classmates by

using your laptop during class for other business and/or activities that do not pertain to the class. The instructor and the school are not liable for any damage to electronic equipment used during class.

- I will drop any student who, in my judgment, is habitually disruptive or disrespectful. Repetitive disruptive or rude behavior will be cause for dismissal from the class.

STUDY STRATEGIES: This is a very difficult and fast-paced class. How could you be successful?

Success in the course = practice, practice, practice!

1. You should **study outside of class AT LEAST 10 hours per week** for a 5-unit class to keep up with your reading, homework exercises, notebook preparation, lab reports, etc. Be sure to make the study time count by removing distractions—for instance, do not watch television or carry on conversations while studying.
2. Read (or at the least skim) the corresponding chapter in the text BEFORE lecture. Keep the questions in mind and pay attention during the lecture time so you may get the answers for the questions that previously you don't understand.
3. I will post my lecture pdf file for each chapter right after we finish the chapter discussions in the class for you to study. Hope it will help.
4. Don't fall behind! Keep up with the reading and the recommended textbook problems! My strategy to help you is keeping a pop quiz each time.
5. **Attend the class and lab on time so you have chance to take the pop quizzes. It's quite hard to catch up if you miss the lectures and labs.**
6. Take scratch paper each time for the lecture. I hope you could participate in the problem solving actively in class. Frequently sketching the problem solving process on the scratch paper would be a good habit.
7. Before each exam, I open a discussion forum in Canvas for 6 pts. 3-pt is for you to post a difficult question, and another 3-pt is to answer another student's question with explanations. So students have chance to help each other.
8. Ask questions! Come to office hours, tutoring, or form a study group to get them answered! It's YOUR responsibility to **take charge of your learning**; there are many resources to help you succeed!

Chemistry 25 is considered to be a **very difficult course**. You have to put much time to study really hard to pass the course or to get a good grade. I wish you have good luck with Chem. 25 this quarter!

Chem 25 Lab Syllabus

REQUIRED LABORATORY MATERIALS

1. **Lab Manual: Preparation for General Chemistry** laboratory manual listed for Chem 25. [link: https://www.bkstr.com/deanzastore/product/preparation-for-general-chemistry-14770-1](https://www.bkstr.com/deanzastore/product/preparation-for-general-chemistry-14770-1)
ISBN: 9781307817706 (\$43.25)
2. **Laboratory Safety Goggles**
3. lab notebook with pages numbered

OPTIONAL LABORATORY MATERIALS:

1. Lab Coat
2. Disposable nitrile gloves

LABORATORY LECTURE

The beginning of each laboratory session is designated as a laboratory lecture period for which you **must be on time** in order to perform the scheduled experiment. The instructor will use this lecture period to outline important details of the procedure, overview theory and calculations, and discuss common safety hazards and proper chemical disposal techniques. *Being late for the beginning of lab will result in a penalty to the grade for that lab assignment. If you come to the lab 15 minutes late, we cannot allow you to perform the experiment due to safety concerns. Your lab score for the lab will be 0.*

LAB ATTENDANCE

Attendance in the laboratory is **mandatory**. I will be taking roll in the lab each time at beginning. And I will **sign off YOUR NOTEBOOK before you leave the lab**. If you miss one lab time, you will lose that portion of score. You may not have chance to understand the materials if **more than 1 absence** is counted. I may allow for emergencies and other complications in life. **You need to submit the document for verification.**

Additionally, do not plan on leaving lab early. Labs will regularly take the total amount of time allotted.

If you miss more than 3 lab periods due to Covid then you must either withdraw from the course (if it is before the withdraw deadline or request an extended withdraw) or receive an F in the course. If you miss 3 or more lab periods for any other reason (whether excused or unexcused), then you must either withdraw from the course or receive an automatic grade of F for the course. This is a lab course and lab attendance is required. Any absences must have supporting written documentation or notices from Health Services, Police Reports, etc.

TARDINESS:

Students have to be on time in the lab for full lab credit. You are counted as tardy if you arrive more than 5 minutes late. Each tardy will deduct 2 points from your prelab. **If you are more than 15 minutes late, you will not be allowed to perform the experiment for that day, and will be counted as absence.**

LAB SAFETY

Being safe in the lab is a top priority. The importance of safety in the laboratory will be focused upon during the first day of classes. **Students who are absent for this essential lab period will be dropped from the course.** During the quarter, any unsafe behavior, intentional or not, will be noted and may be cause for dismissal from the course. For your protection, **safety goggles must be worn AT ALL TIMES as long as one student is still doing the lab and have chemicals in the lab bench.** One or two warnings will be issued to any student that is observed wearing their goggles on their forehead, hanging them around their neck, etc. instead of wearing over their eyes. If the warnings are disregarded or ignored repeatedly, points will be deducted or expulsion from the lab may result with zero credit. Those students with prescription glasses will be required to wear safety goggles over their prescription glasses.

You need to finish the first module about ACS safety training and read our Department safety rules and housekeeping rules. You need to upload the certificate and student signature sheet to canvas during the first week and

Here I listed several safety videos for you to study about safety:

[https://www.youtube.com/watch?v=3ELbwzqyuhs,](https://www.youtube.com/watch?v=3ELbwzqyuhs)

PRELAB AND NOTEBOOK PREPARATION:

Prelab includes two parts

(Part 1) **BEFORE COMING TO A LAB MEETING**, complete the following entries in your notebook *in PEN*:
The date, your name, title, list of reagents (including concentrations), safety, and simple procedure

(Part 2) Your laboratory manual has a set of pre-lab questions that can be found after the general introduction. Answers to these questions are due at the beginning of the laboratory period.

Prelab is safety related item. It is important to finish prelab before you come to the lab. If you do not do the prelab, you will not allowed to perform the lab work! **Even though the instructor drop the lowest prelab, you must do all prelabs!**

LAB REPORTS:

Many lab reports will be due **one week after** you finish the experiment. Worksheet might be due in the same day or in the next lecture time. There will be **20% deduction for each late day**. You will receive a grade of zero for lab reports that are more than **5 days late**. The report is due at the beginning of the lab meeting. A laboratory report is considered late if not received **by me in person** on the day and time it is due. Although for most experiments you will be working with one partner, **everyone must turn your own report each time**. You are encouraged to discuss lab questions and results with your partner and other group students to enhance the understanding of the experiments. Please don't copy other students' report and please don't use your lab partner's excel graph, you need to make your own graph.

DURING THE LAB: **You need to continue notebook recording in ink!**

- During the lab lecture, record some background notes and/or principles in your notebook.
- Record your lab data and observations **directly to notebook**, then transfer to your report page.

Points will be deducted if you forget to bring your notebook to the lab, if you write in pencil for the lab results, or if you record data on scratch paper.

You need to let me sign your notebook for this part before you leave the lab. The notebook score be part of the lab report.

FOLLOWING THE LAB: After the lab, you need to finish the Data Analysis and Post-lab Questions in data pages and report pages. **You do NOT do these parts on notebook, so no need to use pen (pencil is OK)**

Lab report that you submit should include:

Data analysis and/or graphs.

Post lab questions if there are any (in printed out paper).

Please put your lab partner's name in your report, so I could grade them together. Each student needs to turn his/her report to me on time

LAB EXAM

There is one laboratory exam for this course worth 90 points. The laboratory exam will be given during your regularly assigned laboratory sessions at the end of the quarter. **No early, late or make-up lab exams will be given and all lab exam scores will count toward your overall course grade.**

LABORATORY GRADE

Your laboratory work will comprise 27% of your overall grade (not include lab tests) in this course indicated below:

	pts	%	
Prelab in notebook (5x8)	40	4	
Lab Report (15x8)	120	12	Drop the lowest one
Lab Exam	90	9	
ACS safety & Sig. Sheet	20	2	
Total	270	27	

You will be deducted 2 points for every tardy to lab section (5 to 15 minutes late). More than 15 minutes late will be count as absence! **If you fail the laboratory portion of this course, you will not receive an overall passing grade.**

CHEMICAL DISPOSAL

As a concern for the environment and to follow county, state and federal law, proper chemical disposal is essential. Check with the instructor if you have any questions. A student who repeatedly fails to comply with directed safety and/or chemical disposal procedures will be deducted the score in the lab report, and may be dropped from this course.

CLEAN UP

You must clean up your lab area and put the equipments back at their storage locations after the experiment. If you spilled a bit of chemicals at the reagent area, you **must** clean it up immediately, and put the chemicals into the waste bottle. If you do not do clean up, your lab performance grade will be low. If you have a large reagent spill, you need to report to your instructor to get help to do clean up.

CHECK-OUT

Check-out occurs at the last lab session. If a student drops the course, he/she **must check out during his/her regular laboratory section meeting with his/her lab instructor or come to the last lab session (11th week) to check out.**

Good Luck with the Chem 25 Labs and have fun!

How to Keep a Lab Notebook

Notebook Rules

1. Lab notebooks are bound (pages tied and glued together so that they are not easily removed. They are also numbered on every page, so again it is difficult to add or remove pages without this being obvious.
2. **All notebooks records are kept in ink. Mistakes in a notebook should be lined out with a single line, never covered with Whiteout or similar products, nor scribbled over to obscure the original notation(s).** This generates a permanent non-changeable record of the work done. This is crucial! If you ever work in a laboratory, you must NEVER erase, whiteout, cover over, or remove any mistakes or data. If you did so, this would be classified as data falsification and you could be fired, as well as face fines and criminal prosecution.

3. All notebook pages must be dated and should also have the title of the experiment being carried out on it.

4. **All notebooks should have a table of contents** for the work done. The traditional place for a table of contents is in the front of the book. Many notebooks will include a space for a table of contents. If yours doesn't, **leave the first 3 pages blank** and construct your own.

5. **Since we just start to learn how to keep lab notebook. For this quarter we need to keep the following sections: Title, Purpose, Chemical/Safety Equipment, Procedure, and Data.**

All other sections, including Graphs and Tables, Discussion/Errors, Post-lab Questions need to be done on the printed out report pages.

Department Lab Schedule

LAB MEETS ONCE A WEEK		
WEEK OF	WEEK	MONDAY
9/24/2023	1	CHECK-IN
10/1/2023	2	MEASUREMENTS
10/8/2023	3	DENSITY & GRAVITY
10/15/2023	4	ATOMIC STRUCTURE & PERIODIC TABLE
10/22/2023	5	IONIC COMPOUNDS
10/29/2023	6	EMPIRICAL FORMULAS
11/5/2023	7	CHEMICAL REACTIONS
11/12/2023	8	COVALENT COMPOUNDS
11/19/2023	9	MOLAR VOLUME**
11/26/2023	10	VINEGAR ANALYSIS
12/3/2023	11	CHECK-OUT
12/10/2023	12	FINALS
**: using chem 1A set up		

Most lab reports are due one week after the labs are completed in the laboratory. Some exceptions will be announced ahead of time, such as a dry lab will be due next lecture period.

TENTATIVE LECTURE AND LAB SCHEDULE:

Schedule is subject to change. I will announce the change in the class and/or in canvas announcement.

Date	Lecture (M & W)	Mon. Labs
Wk 1: 9/25 & 9/27	<ul style="list-style-type: none"> ● Discussion of Syllabus ● Ch-1: Matter and Energy ● Ch-2: Atoms, Ions & Periodic Table ● Pop quiz 1 	Mandatory <ul style="list-style-type: none"> ● Introduction /Safety ● Lab notebook ● Check-in
Wk 2 10/2 & 10/4	<ul style="list-style-type: none"> ● Ch-2: continued ● Ch-3: Chemical Compounds ● Pop quiz 2 & 3 	Lab 1: Measurements, Significant Figures, Calculation (p11-p28) <ul style="list-style-type: none"> ● Notebook and prelab due at the beginning
<u>10/8, Sunday</u>	<u>Last Day for Drops w/ Refund</u>	
Wk 3: 10/9 & 10	<ul style="list-style-type: none"> ● Ch-4: Chemical Composition ● Ch-5: Chemical Reactions & Equations ● Pop quiz 4 & 5 	<ul style="list-style-type: none"> ● Lab 2: Density and Specific Gravity (p29-41) ● Notebook and prelab due at the beginning HW Ch-1,2,3 Due on Sat.*
Wk 4: 10/16 & 18	<ul style="list-style-type: none"> ● Ch-6: Quantities in Chemical Rxns ● Review** on Monday ● Exam 1 on Wed. (Ch-1,2,3) 	<ul style="list-style-type: none"> ● Lab 3: Atomic Structure & Periodic Properties (p43-57) ● Notebook and prelab due at the beginning
Wk 5: 10/23 & 25	<ul style="list-style-type: none"> ● Ch-7: Electron Structure and the Atom ● Ch-8: Chemical Bonding ● Pop quiz 6 & 7 	<ul style="list-style-type: none"> ● Lab 4: Ionic Compds: Their Names & Formulas (p59-74) ● Notebook and prelab due
Wk 6: 10/30 & 11/1	<ul style="list-style-type: none"> ● Ch-8: continued ● Ch-9: The Gaseous State ● Pop quiz 8 & 9 	<ul style="list-style-type: none"> ● Lab 5: Empirical Formulas of Compounds (107-120) ● Notebook and prelab due HW Ch-4,5,6,7 Due on Sat.
Wk 7: 11/6 & 8	<ul style="list-style-type: none"> ● Ch-10: The Liquid and Solid States ● Ch-11: Solutions ● Review on M ● Exam 2 on Wed. (Ch-4,5,6,7) 	<ul style="list-style-type: none"> ● Lab 6: Chemical Reactions (p91-106) ● Notebook and prelab due HW Ch-4,5,6,7 Due on Sat.
Wk 8: 11/13 & 15	<ul style="list-style-type: none"> ● Ch-12: Rxn Rates & Chemical Equilibrium ● Ch-13: Acids and Bases ● Pop quiz 10 & 11 	<ul style="list-style-type: none"> ● Lab 7: Covalent Compounds: Their Names, Formulas, and Shapes (75-90) ● Notebook and prelab due
<u>11/17, Fri.</u>	<u>Last Day for Drops with W</u>	
Wk 9: 11/20 & 22	<ul style="list-style-type: none"> ● Ch-13: continued ● Ch-14: Oxidation & Reduction Rxns ● Pop quiz 12 & 13 	<ul style="list-style-type: none"> ● Lab 8: Molar Volume (Found in Canvas Files) ● Notebook and prelab due HW Ch-10,11,12 Due on Sat.
Wk 10: 11/27 & 29	<ul style="list-style-type: none"> ● Ch-14: Continued ● Review on M ● Exam 3 –Mon (Ch-8,9,10, 11,12) 	<ul style="list-style-type: none"> ● Lab 9: Titration of the Acid Content in Vinegar (121-134) ● Notebook and prelab due
Wk 11: 12/4 & 6	<ul style="list-style-type: none"> ● Catch up and finish lecture ● Review lab final and lecture final Pop quiz 14 & 15 	<ul style="list-style-type: none"> ● Check-Out ● Lab Final HW Ch-13,14 Due on Sat.
Wk 12: 12/11 & 13	Cumulative Final Exam on Mon. 6:15 pm to 8:15 pm	Final Week, no lab

*All online homework due times are already postponed to the test dates. No further postpone will be given.

**** 10 – 15 min. review is scheduled during pop quiz time, it is for students to ask questions and/or for me to remind you about some writing questions. Similar as pop quizzes, students need to take a piece of blank paper to write down the review materials that we have covered, and submit it for pop quiz score.**

STUDENT LEARNING OUTCOMES:

- *Assess the fundamental concepts of modern atomic and molecular theory.
- *Evaluate the standard classes of chemical reactions.
- *Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

OFFICE HOURS:

MW 5:05 – 5:30 pm in S32
W 7:20 – 8:10 pm in S32 or S1206 (faculty office)

Student Learning Outcome(s):

- Assess the fundamental concepts of modern atomic and molecular theory.
- Evaluate the standard classes of chemical reactions.
- Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

Office Hours:

M,W	05:05 PM	05:30 PM	In-Person	S32
W	07:20 PM	08:10 PM	In-Person	S32 and SC1206