

CHEM 100 - Fundamentals of Chemistry Lecture (6 hours/week, 2.0 Units)

Catalog Course Description:

This course is an introductory study of the language and tools of chemistry. Basic concepts of the structure, properties, interactions of matter and energy are studied, both qualitatively and quantitatively. Emphasis is placed on matter, chemical changes, chemical conversions, chemical bonding, and acid-base chemistry. This course is intended for students majoring in nursing, nutrition, or animal health technology and provides a foundation for further coursework in chemistry, in particular for introductory organic chemistry.

mySDCCD: Our gateway to all things SDCCD at [MySDCCD](#).

Instructor: Dr. Dwayne Gergens

Email: Thank you for your patience. We do our timely best responding to emails within 48 hours during weekdays sent to dgergens@sdccd.edu having CHEM100L as our course identifier in its subject heading. Emails received on weekends and holidays can have a much longer response time when we are away from our computer. We filter spam emails, and an email without an appropriate subject heading is deleted.

My preferred method of contact is email; responding within 48 hours.

Phone: For prompt replies, emailing directions are shown above.

Address: 7250 Mesa College Drive, MS415V, San Diego, CA 92111

Office Hours: My office-visiting hours (face-to-face & remote) availability and appointment procedure are linked in/through Canvas. These visiting hours are times for conversation about our course and student work, answering questions, offering feedback, or listening as a student explores a line of reasoning. We can also provide student resources to help in meeting the challenges outside of class.

Course Period: We remain committed in providing a high-quality learning experience for every student while keeping the health and safety of our community in mind. Our [Covid-19 Information for Students](#) can help students to be better engaged in following our District return to Campus protocols, and our course can pivot to fully-online if needed. We meet twice a week on the day our section is scheduled in MS 408, and supplement our course by having students complete related work in various ways in- and outside of these class meetings as needed.

Canvas: Our course is supported by Canvas; additional details are available in Canvas: Course Nrb (CRN [41259](#)) – Tuesday & Thursday 5:30 pm–6:55 pm in MS-413

Please log into Canvas for details [getting started](#) our course.

Questions about the use of Canvas are best handled by [Canvas Support](#) or (1-844-612-7421) email: support@instructure.com. We are here to help with technical questions; however, students are responsible for their own use of technology, while working from a reliable computer of their choice computer having the correct computer settings in our course, and knowing the mechanics and use of Canvas.

Textbooks: Details on our OER (open educational resources) textbook are linked below:

(1) Introductory, Conceptual, and GOB Chemistry

a. [Basics of General, Organic, and Biological Chemistry \(Ball et al.\)](#)

Campus Wi-Fi: [Mesa Wireless Internet](#)

Additional Supplies

- Access to reliable computer, Internet and printer.
- A current email registered with SDCCD.
- Scientific calculator.

Un buen científico
puede hacer mucho
por el mundo.
Dr. Mario J. Molina
Nobel Prize Laureate 1995



"A good scientist can do a lot for the world."

Computer Skills Advisory:

Entry-level computer skills are needed to complete types of course activities requiring computer skills; a basic familiarity with computer terms and use, word processing, document manipulation, spreadsheets, email, online services and successfully navigating through online material, technology requirements and troubleshooting are expected.

Prerequisite: MATH 092 (Applied Beginning & Intermediate Algebra) or
MATH 096 (Intermediate Algebra and Geometry) or with a grade of "C" or better,
or equivalent, or Assessment Skill Level/Milestone M40/M50.

Course Objectives (CIC Approval: 05/11/2023):

Upon successful completion of this course, students will be able to:

1. Use appropriate vocabulary to explain the steps of the scientific method.
2. Compare and contrast the properties of the states of matter, classify matter and explain how it can be altered through chemical and physical changes, and describe how matter and energy interact.
3. Use English, metric and SI units to express measurements of length, volume, mass, density, temperature and energy, and perform unit conversions using dimensional analysis.
4. Explain the key concepts and models leading to the development of atomic theory.
5. Apply concepts regarding the structure of the nucleus to explain principles of isotopes, nuclear stability and nuclear reactions.
6. Apply the concepts of modern atomic theory.
7. Use the periodic table of the elements to identify metals, nonmetals, metalloids, groups, periods, atomic numbers and atomic masses, and explain periodic trends in the properties of the elements.
8. Compare and contrast different types of bonding, and use Lewis structures and the valence shell electron pair repulsion (VSEPR) model to determine the shapes and polarities of molecular substances.
9. Describe the effects of bond type and molecular polarity on intermolecular forces and the properties of substances.
10. Name and write chemical formulae for binary covalent compounds, simple ionic compounds and acids, and derive quantitative information from the formulae.
11. Classify chemical reactions and write balanced chemical equations to express those reactions.
12. Use the mole concept and Avogadro's number to perform mole and stoichiometric calculations.
13. Employ Boyle's Law, Charles' Law and the Ideal Gas Law to study the relationships among pressure, volume, temperature and quantity of gases, and use the kinetic molecular theory to explain these relationships.
14. Explain the factors that affect the formation of solutions and perform concentration calculations, including dilution and solution preparation problems.
15. Describe the properties of acids and bases.
16. Explain the concept of equilibrium.
17. Relate pH to hydrogen/hydronium ion and hydroxide ion concentrations and perform pH calculations for strong acids and bases.

Course Learning Outcomes (Lecture Courses, DOC & Department Approval: January 2017)


- I. Measurements and Calculations
- II. Atom/Matter
- III. Nomenclature
- IV. Structure and Properties
- V. Chemical Reactions

Kazuo Inamori
稲盛 和夫

Inamori, who is a Zen Buddhist priest, established the Inamori Foundation in 1984, which awards the annual Kyoto Prize to honor those who have made "extraordinary contributions to science, civilization, and the spirituality of humankind."



Course Overview* – What is this course all about ???

 *No prior knowledge of chemistry is needed for our course. We'll be on a journey together:

- Focusing on becoming better Citizens of Science, by
- Learning the FUNdamentals of Chemistry, while Going back to ELEMENTary School.

Is this right fundamentals course on our pathway for learning???

- CHEM100/100L are courses applicable for nursing, nutrition, allied health sciences, animal health technology majors, and are required in the preparation for ANHL120, ANHL145/145L, BIOL205, CHEM130/130L and CHEM160/161.
- If a student is planning to enroll in CHEM200/200L, CHEM255 and/or BIOL210A, majoring in science or satisfying prerequisites for professional schools, do not enroll in CHEM100/100L.
- More information about transferability for this course try [ASSIST](#), and our [College Catalog](#).



Methods of Evaluation, Course Activities & Assessment:

As we progress through our textbook, Canvas Module content and Weekly Chapter Readings & Lecture Schedule of Topics, student success will be evaluated based on a number of course activities relevant to our course objectives in the course outline of record ([COR](#)). Proper time management outside-of-classroom preparatory study time (i.e., pre- and post-lecture work, reading the textbook, laboratory excerpts, homework, computer assisted instruction) is needed per week as we journey through our schedule to satisfactorily meet our course objectives.

Weekly Module Readings & Lecture Schedule of Topics:

Our schedule and major event due dates—syllabus page 9—are set but can change depending on student need and pace as we adjust instruction to improve student learning, success and performance in mastering the material. Any changes to our schedule are announced in Canvas.

Course Activities:

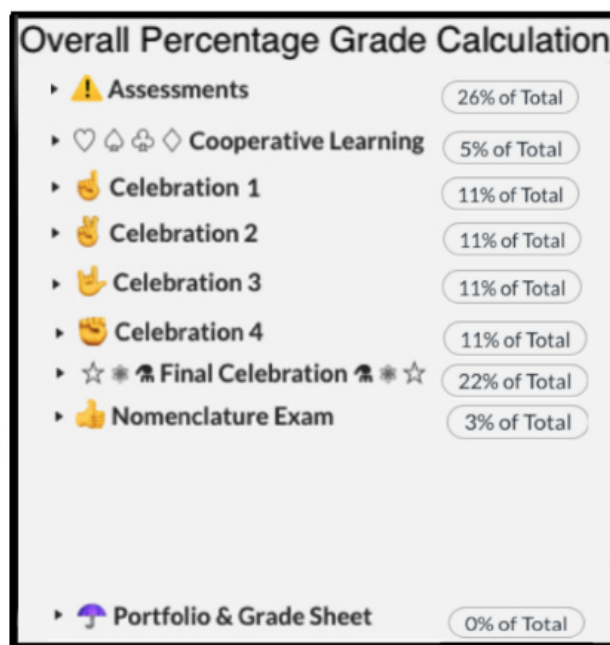
Details for course activities—directions and guidelines, availability period and due date—are announced and listed under [Course Summary](#) in Canvas/Syllabus. The points earned for each assessment in a course activity category is to be recorded onto your grade sheet and counts toward a final Overall Percentage Grade of Achievement; see Grading Scale below. The point earned for each course activity in each category is to be recorded onto our [grade sheet](#).

Overall Percentage Grade Calculation:

Points earned for course activities count toward a final Overall Percentage Grade Calculation of Achievement, which is calculated from the weighted percentages (parts of a student's overall grade) combined and applied to the Grading Scale:

A ≥ 89% B ≥ 78% C ≥ 67% D ≥ 50% F < 50%

The point earned for each course activity in each category is to be recorded onto our grade sheet. We can schedule a meeting to review grades. Bringing to our meeting our student portfolio & [grade sheet](#) filled in with grades is required before we can have a meaningful student discussion regarding a grade calculation.



Overall Percentage Grade Calculation	
▶ ⚠ Assessments	26% of Total
▶ ♡ ♢ ♣ ♠ Cooperative Learning	5% of Total
▶ 🙌 Celebration 1	11% of Total
▶ 🙌 Celebration 2	11% of Total
▶ 🙌 Celebration 3	11% of Total
▶ 🙌 Celebration 4	11% of Total
▶ ☆ ✨ 🌟 Final Celebration 🌟 ✨ ☆	22% of Total
▶ 🙌 Nomenclature Exam	3% of Total
▶ 📁 Portfolio & Grade Sheet	0% of Total



Instructor Communication - Regular Effective Contact:

We are looking forward to working with students closely this semester, and students can expect me to play an active role as we journey through our course together. This is a face-to-face course having weekly course announcements and course activities. We will make announcements weekly, teach course material through laboratory lecture, join students in class discussions during class schedule published times in order to help students to understand course concepts, and provide detailed feedback on major course activities. Additional details for course activities and for keeping a self-directed study guide are provided in Canvas. This is extremely important - safety first. There is no substitute for preparing to work safely in our lecture supported by Canvas, and there are [consequences](#) (Board of Trustees Policy BP 5500) when a student does not. Learning about each course activity with its directions and guidelines, availability period and due date is equally important and course activities are listed under [Course Summary](#) items in Canvas/Syllabus.

Assessments, Celebrations 1-4 & Final:

Assessments (exercises, E's) course activities assess general knowledge of learned concepts. Our four celebrations (exams) and a final exam are scheduled as major course activities and cover all lecture content, completed course activities, textbook and handout resources, and practical work completed up until the day each is scheduled. There is an online laboratory final. Our last celebration (Cel 4) is a sample final and study guide for our Final Celebration. Assessments and celebrations have scantron-type questions (multiple choice, matching, true/false), short essay; fill in the blank, and mathematical computation covered in lecture and laboratory.

Cooperative Learning:

Be engaged. Active, not passive learning is essential in our course. Although all students are expected to have completed course activities individually, work together in study groups. Working in groups is especially recommended for preparing for our celebrations and finals. Asking questions in our course and during visiting office hours is an important part in making the learning experience more participatory.

Portfolio & Grade Sheet:

Keeping a portfolio and grade sheet serves as a progress report, a study guide, and proof of completion for our course, and is needed before we can have a meaningful discussion regarding a grade calculation. It consists of a 3-ring binder containing:

- A [grade sheet](#) with points earned for all activities filled in on it.
- Supplemental packet material containing work completed; packet is available in our bookstore.
- Self-directed study guides and non-graded outside-of-course work (i.e.; textbook problems).
- 3x5 flash cards of all mantras and monatomic and polyatomic ions names.
- Additional handouts provided during the course.

Nomenclature Exam:

Students are tested on substance classification, naming elements, monatomic and polyatomic ions, compounds and acids for both inorganic and organic substances, writing their chemical formulas, and functional group classification of selected classes of organic compounds. Additional nomenclature practice is provided in our supplemental packet and textbook for our course.

Special Incentive Project:

Additional "bonus" points, up to 2% toward our final grade is available. The [special incentive project](#) builds on student prior experience and knowledge. Its content should foster diversity, inclusivity, and empowerment from a chemistry perspective.



Performance/Attendance/Tardiness:

Students are expected to attend every class meeting, to arrive on time, and stay throughout the class period. Students may be dropped from the class for **excessive tardiness**, for **failure to attend class the first day or during the entire first week of class**, or if **the total number of absences exceeds twice the number of hours the class meets per week**. In the case of absence (nonattendance), it is the student's responsibility to inform the instructor.

Key performance indicators show our students making the grade when they are in regular attendance, and are participating in creating a positive course environment. Attendance in our course is determined by participation in academically related course activities. Students are considered present if there is evidence of one's participation in course activities including, but not limited to, submitting a course activity, taking a test, participating in an online discussion, and working in a group. A student is considered to be in nonattendance (absent) if there is no evidence of their participation in the academic activities of our course, and there are consequences.

Absences:

Staying in contact with me by email during any absence is very important. During an absence, a student is responsible for all missing course content & activities (announcements, lectures, assessments, handouts, work, etc.). Not emailing me in making arrangements to make-up a missing course activity on the day of or prior a student absence forfeits a student's eligibility in making-up any missing activity. Absences and missing course activities are considered nonattendance and our limit are two. There are two types of absences—**excused and unexcused**.

- **Excused absence.** An absence is marked 'excused' if a student emails me advance notification prior to or on the day of their nonattendance.
- **Unexcused absence.** Not completing a course activity during its availability period is considered nonattendance and is marked as an 'unexcused absence.' Any activities missed during an 'unexcused absence' cannot be made-up. Missing activities receive zero credit.



A Warning About Turning Course Activities in Late:

Unexpected circumstances can happen leading to late work. Please reach out to me immediately to discuss a plan for success if this occurs. Course activities not submitted when asked to do so by their instructor, or when prompted to do so by Canvas, receive a grade reduction; one-percent grade reduction per every one-minute late. Any course activity mailed to me receives a 10% grade reduction per every day late past the submission and postmark date.

Procedures for Make-ups:

We are not obligated in allowing make-ups for missing course activities due to nonattendance. Making up course activities missed during an 'excused absence' is only considered if it is appropriate & fair to all in doing so and is within the construct and safety of our course schedule and setting. PLEASE NOTE: We are not obligated to consider other absences as excused and can require a student to provide documentation for 'excused absences.' Missing activities during an 'unexcused absence' cannot be made-up.

Withdrawing from Our Course:

It is a student's responsibility for withdrawing (dropping) from our course by the published deadlines. A student's intention should be discussed with their instructor before withdrawing from any course, keeping in mind, if a student is in nonattendance the student will be dropped from our course. Important dates for course activities and major course events are shown on our Weekly Canvas Module and Lecture Schedule of Topics shown on syllabus page 9.

Aloha, Need Help? 😊



Feedback is a Gift. From my perspective, feedback on what students know, what students don't know, and how to improve our course is very much appreciated. We are here to help each other in becoming better “Citizens of Science.” Having as our intention “mastering chemistry by coming prepared, doing preparatory work and asking questions to ensure a concept is understood” will have an impact on student performance & achievement which is used in deriving an overall grade. Are we open to the learning process and helping each other on this journey? If something is not working or if there are questions, please reach out to me by email, and let me know how it is going as we master the fundamentals of chemistry in our course. Mahalo nui loa. Sincerely, Dr.Gergens

Errors in grading:

Errors—hopefully none—can be made in grading. Please reach out to me to discuss the matter if credit is not given where credit is due. I'll be happy to help.

Accommodation for Disability:

If a student is in need of academic accommodations due to a learning disability, physical disability, or any other circumstance needing special accommodations our college's Disabled Students Programs and Services (DSPS) department recommends that students with disabilities or specific learning needs contact their professors during the first two weeks of class to discuss academic accommodations. If a student believes that they may have a disability and would like more information, or have questions about DSPS services at Mesa, contact a DSPS counselor (619) 388-2780 or email mesadsps@sdccd.edu.

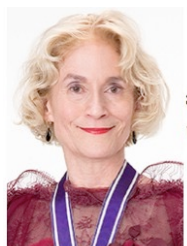
Special Needs & Student Support Services:

If a student is in need of food, clothing, a textbook, we are here to listen and assist in meeting their basic needs on our pathway toward a successful education at Mesa. Student Health Services provides physical and mental health services having nurse practitioners available daily. Also, many additional Student Support Services shown on the next page for our syllabus are available.

Respectful Conduct, College Culture and the Learning Process:

The learning process in our course is based on the belief that everyone has the capacity to broaden one's knowledge and their understanding of methods of gaining knowledge in chemistry and to develop one's abilities in critical thinking, in oral and written communication, and in mathematics. Experiencing these things and developing an awareness of college culture through the lens of other cultures can be the key to accomplishing our goals successfully. With this in mind, treat our time with respect and intention by 'adopting incredible elemental steps for incremental success' (That's Incremental), by acknowledging student productivity and our classmates with kindness and encouragement with simple positive affirmations—like “I am awesome and we have awesome chemistry”—thus keeping the motivation and momentum which develops our capacity for self-understanding as life long learners. Additional tips & strategies for improving motivation and momentum in our learning process are linked in Canvas.

Adopting incredible elemental steps



As we tell stories about the lives of others, we learn how to imagine what another creature might feel in response to various events. At the same time, we identify with the other creature and learn something about ourselves.

*Dr. Martha C. Nussbaum
2016 Kyoto Prize Laureate*

Knowledge makes a man unfit to be a slave.

Frederick Douglass



Academic Integrity Policies / Procedures & Student Support Services

In joining the academic community, the student enjoys the right and shares the responsibility of exercising the freedom to learn.

Plagiarism:

Academic dishonesty of any type by a student provides grounds for disciplinary action by the instructor or college. In written work, no material may be copied from another without proper quotation marks, footnotes, or appropriate documentation. Academic dishonesty of any type such as cheating and plagiarism can result in one or all of the following: a failing grade on the assignment, a failing grade in the class, and/or formal disciplinary action by the college. By enrolling in a course, a student agrees they are the person accessing and completing the work for the course and will not share one's username or password with others.

Student Code of Conduct and Student Behavior:

Each student's conduct is expected to be in accordance with the standards of the college that are designed to promote its educational purposes as expressed in our [student code of conduct](#) available at the Dean of Student Affairs. Charges of misconduct and disciplinary sanctions will be imposed on students who violate these standards of conduct or provisions of college regulations.

Contentious behavior and the inability to follow directions and/or directives:

Contentious behavior and/or the inability to follow directions and/or directives during any activity, or having any course activity—reports, assessments, homework, etc.—prepared in a manner in violation the college's student code of conduct will not be tolerated, and as a consequence for the misconduct, zero credit will be given for that course activity and the student will be reported to our college administrators.

Netiquette:

These [Netiquette Guidelines](#) are suggestions for success in our online learning environment.

Add, Drop and Withdrawal Policy:

It is as student's responsibility to add, drop and withdrawal from classes before the deadlines stated in the class schedule. If a student stops attending our course and fails to withdraw by the deadline stated in the class schedule, a final grade must be assigned to the student.

Audio & Video Recording of My Lectures:

Audio and video recording of my lectures is not permitted in our course unless 1) a student is given permission, 2) the student uses the audio/video of lecture with the understanding that the recorded information is restricted for personal use and not to be distributed to the general public, and 3) the student agrees to providing me with the audio and video recording with its written transcript as email attachments within 48 hours of its recording so it can be shared with the rest of our class. Please reach-out to me if there are questions regarding this or if additional help is needed.

Student Support Services, Veterans Affairs, Academic Tutoring, Library & Scholarship:



- A wide range of student supportive services serving the needs of our students and their well-being, along with [Veterans Affairs](#) for support materials and services are available. Check them out by visiting our [Student Services and Campus Resources](#) webpage for a complete list of services, including tutoring, and counseling, and our [Library](#).
- Free online tutoring is available through our [Mesa Tutoring Computing Center \(MTC2\)](#).
- When there are questions about Canvas and online learning, the [Online Learning Pathway](#) is ready to assist students, and [Mesa College Scholarships](#) are available for students.

Practicing Self-Advocacy by Raising Our Hand to Gain More Insight & Clearer Focus:

Asking questions from a student perspective:

Get the benefit of further explanation, or become engaged in an interesting discussion by asking questions from a student perspective. Since the material presented in our course is cumulative and comprehensive, the questions students ask of their instructors and peers provide information about how carefully our students have been listening, possible areas of confusion, and, most importantly, how an instructor might adjust their style of teaching in meeting the needs of everyone in our class in better providing a 'home court advantage.' When a question is asked, a student becomes a participant rather than a spectator in an academic dialogue. Feedback is a gift. So, please reach out to me for help when something is not understood and when given the opportunity to do so.

Vulnerability is our most accurate measurement of courage (*Brene' Brown*):

- Please "Raise our hand if don't understand."
- Here are some safe-zone questions one can easily ask in practicing self-advocacy.
- "Where do you feel most students have difficulties in understanding this material?"
- "What do you find most interesting or intriguing about the material just presented to us?"
- "From your experience, what are common mistakes students make in solving this type of problem?"
- "What questions should we be asking that we are not?"
- AND most importantly, "Can you please help me?"



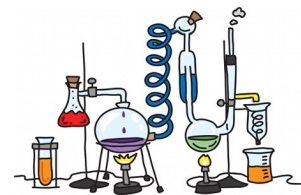
SAFETY QUIZ (this one of two safety quizzes) – Response are to be inputted in to Canvas:

We urge students to follow all safety guidelines, and be to be kind to yourself and others.

- [Mesa College Coronavirus Updates](#)
 - [CORONAVIRUS.GOV](#)
0. In preventing the spread of Covid-19 in this pandemic, we should (list at least four intensions).
 1. Can a student wear contact lenses in the lab? If not, why not?
 2. Explain the expression "STOP, DROP, AND ROLL"?
 3. Explain our immediate actions are to be taken if a chemical solution splashed in our face while we are wearing safety goggles.
 4. Describe the proper procedure for mixing concentrated acid and water.
 5. What is our immediate action if we receive a minor burn?
 6. What are our immediate actions if our lab partner's clothing catches fire?
 7. Describe our immediate actions if acid is spilled on our clothing.
 8. Describe our immediate actions we would take during a moderate earthquake and a severe earthquake.
 9. Describe where the following are located: fire extinguisher; eye wash; safety shower; closest stairwell exit; emergency telephone; closest fire alarm.

Our Course Syllabus:

This syllabus is intended to help students plan their studies in our course. It is subject to change at any time should a change be in the best interest of our course. If a student withdraws and/or is in nonattendance, the student's materials are immediately discarded unless the student contacts me explaining their circumstances. All other student materials are discarded one month after a student overall final grade is posted.



Chem 100 - Weekly Canvas Modules & Lecture Schedule of Topics* Fall 2023

Week	Date	Topic
1.	Aug. 21	CH 1 Introductions and Canvas accounts - What is Chemistry? What's the Matter, Matter of Fact
		CH 1 Being PC as Citizens of Science, The Scientific Method & Names and Symbols first 20 + Extras
		CH 1 ACT'ing on Numbers in Chemistry, Significant Figures & Exponential Notation
2.	Aug. 28	Canvas Module Week 1: E0, E1, E1B, E2 & Safety Quizzes. All DUE August 28 by 11:59pm
		CH 1 Matter - Physical & Chemical Properties & Classification
		CH 1 Elements & Compounds as Pure Substances, and Homogeneous & Heterogeneous Mixtures
		CH 1 Calculator Needed - Measurements - What Is a Measurement? Number & Unit, Precision & Accuracy
		CH 1 Problem Solving: Factor Label Method of Conversions
3.	Sept. 1	LAST DAY TO WITHDRAW WITHOUT A "W" ON STUDENT'S TRANSCRIPT
	Sept. 5	CH 1 Problem Solving; Dimensional Analysis & Density
4.	Sept. 12	CH 2 Natural Abundance of the Elements, Isotopes & Nuclear Chemistry reading Chapter 10.1-10.3
		CH 2 Atom & Elements, Dalton's Atomic Theory, & Periodic Table Overview
		CH 2 Inside the Atom: Charge Balance with J.J. Thomsom & The Nucleus with Ernest Rutherford
5.	Sept. 19	Celebration 1: CH 1 emphasis, ACT'ing on Numbers, Math & Matter. DUE September 11 by 11:59pm
		Extra content Bohr Model of the Atom and Atomic Electronic Structure, Electromagnetic Radiation
		Extra content Electronic Structure, Valance Electrons, Periodicity & Monatomic Ions
		CH 2 Electronic Structure, Modern Atomic Theory (Schrödinger Model) & Electron Addresses
		CH 2 Periodic Trends: Atomic & Ionic Size, Ionization Energy & Electronegativity
6.	Sept. 26	CH 3 Naming Monatomic, Polyatomic Ions & Oxidation Numbers, and Ionic & Molecular Compounds
		CH 3 Substance Type (ICAO): Ionic, Covalent, Acid, Organic, Anion, Cation and Atom
7.	Oct. 3	CH 3 Chemical Bonding: Ionic Electrostatics versus Covalent Sharing of Electrons
		CH 4 Lewis Electron Dot Structures
8.	Oct. 10	CH 4 Chemical (Covalent) Bonding – Lewis Structures & Resonance
		CH 4 Molecular Geometry, VSEPR Model, Bond & Molecular Polarity
9.	Oct. 17	CH 8.1 Intermolecular (Nonbonding) Forces between <u>Molecular</u> Compounds - Gases and Liquids
		CH 8.2 The Solid State: Intermolecular Forces between <u>Nonmolecular</u> Compounds
		Celebration 2 (the COP answer key as our study guide) CH's 1-4, 11*, Bohr's Model
10.	Oct. 24	CH 5 Chemical Reactions as Chemical Recipes: Types, Balanced, Electron Movement Between
		CH 5 Chemical Quantities (mole as a counting device) Calculation of Molar Mass (MM) & Mole Concept
		LAST DAY TO FILE a PETITION for Pass/No Pass
11.	Oct. 27	LAST DAY TO WITHDRAW WITH A "W" ON STUDENT'S TRANSCRIPT
		CH 5 Chemical Composition & Calculation of Empirical Formulas
		CH 5 Chemical Quantities is Stoichiometry (counting quantitatively), Limiting Reagent & Percent Yield
12.	Nov. 7	CH 5.3 The Gas We Live In: Too Much Pressure & Standard Molar Volume
		Celebration 3 in Canvas with CH5 emphasis & CH4 review. DUE November 13 by 11:59pm
		CH 8.4 Universal Gas Law, $PV=nRT$ and The Combined Gas Law,
13.	Nov. 14	Celebration 4 Sample Final in Canvas with Ch's 5, 8 & 9 emphasis. DUE November 30 by 11:59pm
		CH 9 Solutions: Solute-Solvent Interactions, Electrolytes
		CH 9 Reactions in Aqueous Solutions and Solubility Rules & Making Reaction Outcomes & Predictions
		CH 9 Concepts in Concentration and Dilution & Solution Stoichiometry
14.	Nov. 20-25	Thanksgiving Week
15.	Nov. 28	XTR – Special Incentive Project for Extra Credit DUE, details linked on our syllabus, page 4
		CH 10 Acid & Base Titration
		CH 10 Acids, Bases, Salts, Dynamic Equilibrium, and pH
16.	Dec. 5	CH 10 Acids & Bases: Physical Structure & Nomenclature of their Brønsted-Lowry Conjugates
		CH 10 Acids, Bases, Salts, Periodic Trends, Dynamic Equilibrium, pH
17.	Dec. 12	Lecture Final Celebration
	Dec. 14	Nomenclature Exam

Note: Material contained in Chapters 1-6 & 9-10 will be covered in their entirety. For Chapter 11, sections 11.1, 11.2 & 1.3 will be emphasized. Chapter 7 will not be discussed but the concept of energy, phase changes, equilibrium, catalysts & reaction rates will be discussed in lecture.

Work Based Learning (WBL):

Career possibilities in Chemistry: Pharmaceutical and Medicine Manufacturing; Biotechnologist & Medical Lab Technician; Forensic Sciences; Teacher and many more.

[Work-based learning \(WBL\)](#) allows a student to apply classroom content in professional settings while gaining real-world experiences. WBL opportunities can provide students with a deeper, more engaging and relevant learning environment with the opportunity to explore career options—like those listed above. Our lesson plan and optional WBL activity for this semester is as follows:

Description: Our WBL course activity is a student-centered self-guided exploration using Nepris, “Exploring a career in _____” where different career options are explored, answering key questions and sharing their experience with others in our course through the use of Padlet.

Key WBL Questions to be answered as measurable outcomes in this activity are:

- What education and experience is necessary to get a job in this field?
- What is your favorite part of the job and what part of the job do you not like?
- What are the skills necessary to be successful in this career option?
- What is something that a student can do to help them prepare for a career in this field?

Measurable WBL Outcomes to be share with our classmates by November 28, XTR:

At the end of the lesson, a student should reflect on the experience, analyze its effectiveness, and share these answers/outcomes with their classmates using Padlet. Addition details are provided in our Canvas course shell Module/WBL. This course activity is optional and counts up to 2% bonus toward our overall grade calculation as an incentive project and/or in lieu of making up a missing lecture course activity).

Important Deadlines:

Student Add:	09-01-23	Deadline to add class with Permission Number and pay Enrollment Fee &/or all applicable fees.
Dp1 Student Drop:	09-01-23	Deadline to drop class with no "W" recorded.
Refund Date:	09-01-23	Deadline to drop classes and be eligible for refund of Enrollment Fee and/or all applicable fees.
PNP Pass/No Pass:	10-27-23	Deadline to select P/NP option for classes with "Student Option" grading basis.
Dp2 Withdraw:	10-27-23	Last day to withdraw from classes and receive a "W". No drops accepted after this date. Thereafter, a student must receive a letter grade.
Grades:	01-05-24	Deadline for instructors to submit final grades.