



# CHM2045 GENERAL CHEMISTRY I

SPRING 2025 MONDAY/WEDNESDAY/FRIDAY (MWF) PERIOD 8

Period 8 sections: 24925-24928

*Welcome to General Chemistry 1- it's been waiting for you!*

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## INSTRUCTOR INFORMATION

### Instructor

**Dr. Ashlyn Hale**

Assistant Instructional Professor [ashlyn.rose.hale@chem.ufl.edu](mailto:ashlyn.rose.hale@chem.ufl.edu)

I value your input regarding making this course more accessible and inclusive. Please reach out with suggestions.

### Email/Office/Phone

Email in Canvas preferred

**Office hours are my favorite and the key to your success! Don't be shy- you can come and ask any questions you have. Hope to see you there!**



### Student Hours

**Mondays, Wednesdays, and Fridays  
Period 7**

**Other meetings may be available** by appt via zoom if needed

All student hours will meet in **LEI308** (except zoom ones)

I welcome you to contact me outside of class and student hours. **You may email me via canvas and/or see me before or after class.**

**Top tip!**

## TEACHING ASSISTANT (TA) TEAM

Teaching assistants are graduate students (working towards PhDs in chemistry) or are undergraduate TAs who earned an A in my class before. Please ask them any questions you have (on concepts/problems, study tips, etc.)- they are like free tutors! 😊

**Graduate TAs:** TBD

**Student hours:** located in SFH 105, the Chemistry Learning Center or CLC

**I will post a schedule of graduate and undergraduate TA hours on a page on Canvas.**

[Academic Resources](#) offers free tutoring assistance. See their website for details.

## COURSE DELIVERY/MEETING TIMES

- face-to-face in FLI50 MWF
- discussion section (Tuesday class) in-person with TAs; room depends on your class number
- Exams (DTE – evening assembly exams), periods E2-3 (8:20 to 10:20 PM)

## COURSE DESCRIPTION

CHM 2045 is the first semester of the CHM2045/CHM2045L and CHM2046/CHM2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM2046. (P)

This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.

## REQUIRED & RECOMMENDED COURSE MATERIALS

### TEXTBOOK (ONLINE EBOOK WITH HW; REQUIRED IN FULL)

Listed below you will find the Macmillan Learning ISBN (more info on canvas) and pricing information for the [Interactive General Chemistry, Reactions, 2.0 Achieve](#).

Can also acquire an older version of Silberberg (6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>) or the current edition (10<sup>th</sup>)

A free OER (Open Educational Resources, openstax) chemistry book is available in pdf form on the canvas page (Chemistry 2e).

There are two options for purchasing access to homework/ebook:

**Option 1:** consent to have the purchase price charged to your student account following the directions posted on the course homepage in Canvas; this is a time-limited option after which only Option 2 is available.

**Option 2:** purchase an access code for the materials at the UF Bookstore (at a slightly higher price).

To opt in, navigate to: <https://bsd.ufl.edu/allaccess>. Click the "Opt In" tab or view the "View Eligible UF All Access Classes" button. You will be prompted to log in using Gatorlink credentials. Follow the prompt to authorize charges to your student account. The access code will then be provided. Copy the access code to your clipboard. In the Canvas course, click on the MacMillan module, and provide the access code when prompted to do so. If you have any questions about the authorization process or refunds contact [Included@bsd.ufl.edu](mailto:Included@bsd.ufl.edu).

All other assigned material will be available through Canvas.

### CALCULATOR (REQUIRED, MUST PURCHASE)

- TI-36 is a good calculator, has quadratic functions and is most like the TI-83 (TI-83 or 84 not allowed), need logarithmic functions; must be non-graphing and non-programmable

## GENERAL EDUCATION OBJECTIVES AND LEARNING OUTCOMES

Primary General Education Designation: Physical Sciences (P) ([area objectives available here](#))

A minimum grade of C is required for general education credit. Courses intended to satisfy the general education requirement cannot be taken S/U.

Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical

systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

In General Chemistry I, these objectives will be met as detailed below.

Some of the specific skills I hope you will obtain in this course are listed below:

**Content:** *Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline.* Students will acquire a basic knowledge of a variety of chemistry concepts including the scientific method, stoichiometry, reaction types, thermodynamics, solutions, solids, gases, and chemical bonding. Achievement of this learning outcome will be assessed largely through assigned homework problems, and quizzes and exams.

**Communication:** *Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.* Students participate in class discussions throughout the semester to reflect on pertinent topics. Achievement of this learning outcome is realized through discussion sessions and/or office hours during which students formulate questions, construct arguments, and use logical reasoning to draw reasonable conclusions.

**Critical Thinking:** *Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems.* Students apply mathematical knowledge and reasoning to solve chemical problems. This may entail use of algebra, basic geometry, and graphical analysis. Achievement of this learning outcome is largely assessed via worksheets, assigned homework problems, and quizzes and exams.

## COURSE LEARNING OUTCOMES

A complete list of student learning outcomes is posted in Canvas, organized by module/chapter.

Students will apply the law of conservation of matter and energy.

Students will implement rules of significant numbers to all measurements.

Students will explain the fundamental properties of matter including but not limited to atomic and electronic structure, and periodicity.

Students will apply IUPAC rules of nomenclature.

Students will predict molecular geometry and properties from bonding theories.

Students will predict and explain the products of chemical reactions (e.g. acid-base, oxidation-reduction, precipitation, dissociation).

## TENTATIVE GENERAL SCHEDULE

The following lecture and quiz schedule is *tentative*, but **exam dates will not change- exam dates will be added once the school decides them.**

A more detailed daily lecture scheduled with assigned readings can be found at the end of the syllabus.

Holidays: Jan 20, spring break March 17-21

Reading Days: Apr 24-25

**All classes, exams, and quizzes will be live (in-person)**

Week	Topics	Silberberg Chapters
1 (Jan 13-17)	Introduction and Review (2)	Chap. 1-2
2 (Jan 20-24)	Mass Relations and Stoichiometry (2)	Chap. 3
3 (Jan 27-31)	Aqueous Reactions (4)	Chap. 4
4 (Feb 3-7)	Gases (3)	Chap. 5
5 (Feb 10-14)	<b>Progress Exam 1 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
6 (Feb 17-21)	Enthalpy & Calorimetry (3)	Chap. 6
7 (Feb 24-28)	Quantum Mechanical Model (2)	Chap. 7
8 (Mar 3 – 7)	Electron Configuration and Periodic Trends (2)	Chap. 8
9 (Mar 10-14)	Chemical Bonding Models (3)	Chap. 9
10 (Mar 17-21)	<b>Progress Exam 2 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
11 (Mar 24-28)	Molecular Geometry (4)	Chap. 10
12 (Mar 31-Apr 4)	Covalent Bonding Theories (2)	Chap. 11
13 (Apr 7-11)	Intermolecular Forces, Liquids and Solids (4)	Chap. 12
14 (Apr 14-18)	Review	
15 (Apr 21-25)	<b>Progress Exam 3 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
15/16 (Apr 26-May 2)	Properties of Solutions (3)	Chap. 13
	Chemical Kinetics (4)	Chap. 16
	<b>Final Exam (10:00 am-12:00 pm)</b>	<b>Cumulative</b>

**No classes on these days:** Monday, Sept. 2 (Labor Day); Friday, October 18 (Homecoming); Monday, Nov. 11 (Veterans Day); Monday through Friday, Nov. 25-29 (Thanksgiving); Friday, Dec. 6 (Reading day 2).

## COURSE COMMUNICATIONS

### GENERAL QUESTIONS

General course questions should be posed to your instructor during student hours, or to TAs during their student hours or during discussion sessions.

### PRIVATE OR GRADE-RELATED QUESTIONS

Direct these to your instructor via the mail function in Canvas. Do not email outside of Canvas to your instructor's external email address – we aren't permitted to discuss grade related questions outside of Canvas. You will be asked to resend the query through Canvas. Instructor response time to email queries is <48 h during the workweek, or the first business day for emails received Friday or over the weekend. Grade disputes: In writing via email to instructor within one week of the posted grade.

## COURSE POLICIES

### ASSIGNMENT DUE DATES

All due dates for assignments are clearly posted in the course assignments of the Canvas page and reflect the most up-to-date information. Unfortunately, life happens and you may need extra time to complete an assignment. Let me know so we can come up with a solution. To get the most out of these assignments they need to be completed on time to keep your learning material on track

### IClicker

- Keeps you engaged and active in the classroom, and prepare for exams/quizzes
- Time to completion: none (in class participation)
- 3 days (about 9 points) are dropped before calculating your final iClicker grade
- 

### POST-LECTURE ASSIGNMENTS (PLA)

- PLAs help you review the material learned in that day's class (read the assigned sections in the book, work the sample problems in the book, then attempt PLA)
- 3 attempts; the highest score will count towards your final grade
- Due within 24 hours of lecture- this is to help you track how much of the material you retained from lecture.
- 3 of the PLA assignments will be dropped before calculating your overall grade
- PLAs are located within Canvas under the Assignments Tab

### DISCUSSION SESSIONS & WORKSHEETS

- **Tuesday discussion class (in-person)**
- Paper version available under Modules, **suggestion: do before attending discussion**

- Time to completion: 0.5 to 2 hours (does not include attendance at Tuesday class)
- **10 points available per week:**
  - **Attendance and participation will earn you 5 points**
  - **Wednesday worksheet quiz on canvas will earn you 5 points (3 attempts)**
- Grade discrepancies: address to your grad TA within one week
- 1 assignment will be dropped from this category

Worksheets problems are more examples of problems that help you prepare you for the exam.

#### ACHIEVE

- **HW in ACHIEVE for each class day** to help you learn material and prepare for exams/quizzes
- Time to completion: 0.5 to 1 hour
- Multiple attempts
- 3 assignments dropped in this category

#### CANVAS QUIZZES

- Most difficult of the assignments
- **Time to completion: 1 hour**
- **Timed and 1 attempt**
- Prepares you for actual exam in a low stakes, yet similar environment, as an Exam
- Weekly quiz (available for 48 hours), due Friday, available Thursday (exceptions are noted in the detailed schedule)

#### PROGRESS EXAMS

- **Exams are at night (8:20 to 10:20 PM) during E2-3 periods (During Term Exams)**
- Exam dates in the schedule (at the end of the syllabus)
- Scantrons, formula sheet, and blank scratch paper are provided
- Bring pencils and eraser, and official form of identification
- Use a non-graphing, non-programmable scientific calculator
- Turn your cell phones and other electronic devices off and keep in your bag.
- See next page for our progress exam average/replace policy

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#### PROGRESS EXAM "AVERAGE/REPLACE" POLICY

- Applies to all students.
- **The lowest of the 3 progress exams replaced by the average of the 3 progress exams.**
- No dropped progress exam.

For example, if a student scores the following on their three progress exams: 0%, 65%, 80%, the 0% would be replaced with the average of 0, 65 and 80, which is 48%. That is a much better score than a 0.

- **30 points deducted if you bubble in the incorrect or no form code**
- **5 points deducted if you are in the incorrect room or your name is on the no-match list from the scanning center**



## OPTIONAL HOMEWORK

- Several optional homework assignments are available for each chapter to help you understand the material. The homework is posted in Canvas. You have multiple attempts to successfully answer the questions. These are not worth any points.
- You should also work on numerous End-of-Chapter questions (EOCs).
- 

## ATTENDANCE, EXTENSION REQUESTS

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Exam absences will be handled in accordance with official UF academic regulations. For more information, see <https://catalog.ufl.edu/UGRD/academic-regulations/> . See below for further clarification for two different types of situations.

(1) Conflicts with other events: acceptable reasons may include religious holidays, military obligations, special curricular requirements (e.g., attending professional conferences), or participation in official UF-sanctioned activities such as athletic competitions, etc. For more information on such absences see the official UF Policy at <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#absencetext> ). If you must be absent for an exam due to a documented and approved conflict known in advance, you must e-mail your instructor (within Canvas) the documentation at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you.

(2) Missing an exam due to an emergency or sudden illness: If you are absent for an exam due to an unpredicted documented medical reason or family emergency, you must contact the instructor as soon as possible, and you may be asked to have your excuse verified by the Dean of Students Office (DSO). Your instructor will follow UF academic regulations in evaluating the notification and/or documentation received from you or from the DSO on your behalf. Once your instructor is satisfied with the validity of your exam absence a make-up exam will be scheduled after a reasonable amount of time, i.e., before the end of the semester. If your documentation is deemed insufficient to excuse your absence you will receive a zero on the missed exam.

## WORKLOAD

- UF is a Carnegie I research-intensive university.
- Federal law requires UF to assign at least 2 hours of work per week outside of class for every contact hour (3 contact hours for CHM2045 = **minimum of 6 hours per week**)

**If this is your first chemistry class here or you are trying to be more successful this time around, please make a study plan at the start of the term. I will discuss some tips the first day of class. We find that students can underestimate the time it takes to truly learn the concepts. We are here to help! 😊**

## GRADING

### GRADE POLICY

- Grades are not rounded at the end of the semester; No extra credit available
- Current UF grading policies for assigning grade points can be found in [the catalog](#).
- Grading policy: A minimum grade of C is required for general education credit. Courses intended to satisfy the general education requirement cannot be taken S/U.

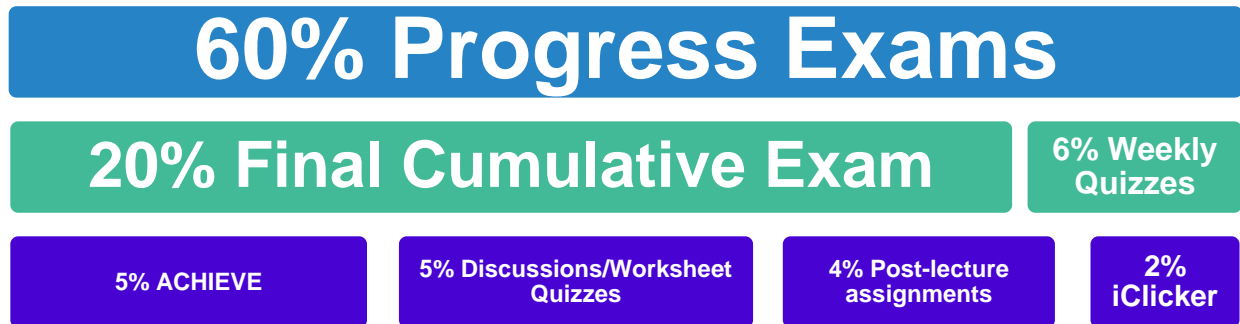


Figure 1: Chart of assignment weights

### ASSIGNMENTS WEIGHTS ARE AS FOLLOWS:

Assignment Group	Weight %
Progress Exams	60%
Final Cumulative Exam	20%
Weekly Quizzes	5%
Achieve Homework	5%
Discussion/Worksheets	5%
Post-Lecture Assignments (PLAs)	4%
iClicker	2%
<b>TOTAL</b>	<b>100%</b>

Grade scale (note: there is no rounding to your score in Canvas):

Letter	A	A-	B+	B	B-	C+	C	D+	D	D-	E
Cutoff	90.0	86.0	83.0	80.0	77.0	73.0	69.0	66.0	63.0	60.0	< 60.0

## GENERAL INFORMATION

### PREREQUISITES

Please refer to the [Undergraduate Catalog](#) for placement and prerequisite information.

### COURSE DESCRIPTION AND GOALS

The first semester of the CHM 2045/CHM 2045L and CHM 2046/CHM 2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM 2046. (P).

By the end of this course, students will be able to describe and apply the scientific method, and describe and apply skills to solving problems including those involving multi-step mathematical sequences. Students will acquire knowledge generally of the field of chemistry, and will be able to connect this knowledge to principles that govern the natural world.

### FIRST DAYS

- Log into canvas and access the course.
- Check daily for announcements and emails
- Helpful tips on study habits and study skills
- How to succeed in the course

## UNIVERSITY POLICIES

### STUDENTS REQUIRING ACCOMMODATIONS

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting [disability.ufl.edu/students/get-started](http://disability.ufl.edu/students/get-started). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

### UNIVERSITY POLICY ON ACADEMIC MISCONDUCT

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida. The following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>."

## IN-CLASS RECORDING

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

## CAMPUS RESOURCES

1. **U MATTER, WE CARE:** If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.
2. **COUNSELING AND WELLNESS CENTER:** Visit [the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.
3. **STUDENT HEALTH CARE CENTER:** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [Student Health Care Center website](#).
4. **UNIVERSITY POLICE DEPARTMENT:** Visit [UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
5. **UF HEALTH SHANDS EMERGENCY ROOM / TRAUMA CENTER:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center website](#).
6. **GATORWELL HEALTH PROMOTION SERVICES:** For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

## ACADEMIC RESOURCES

1. **E-LEARNING TECHNICAL SUPPORT:** Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).
2. **CAREER CONNECTIONS CENTER:** Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
3. **LIBRARY SUPPORT:** Various ways to receive assistance with respect to using the libraries or finding resources.
4. **ACADEMIC RESOURCES CENTER:** Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

5. **WRITING STUDIO:** 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
6. **STUDENT COMPLAINTS ON-CAMPUS:** Visit the [Student Honor Code and Student Conduct Code webpage](#) for more information.
7. **ON-LINE STUDENTS COMPLAINTS:** View the [Distance Learning Student Complaint Process](#).

## FEEDBACK

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## GETTING HELP

For issues with or technical difficulties with Canvas, contact the UF Help Desk: <https://lss.at.ufl.edu/help.shtml>; (352)-392-HELP.

## INCLUSIVE LEARNING ENVIRONMENT

We embrace the University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinion or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." We are committed to fostering an open and inclusive classroom and laboratory environment in our College, where every student, guest instructor and contributor feels valued. If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office on Multicultural & Diversity Affairs  
Website: <http://www.multicultural.ufl.edu/>

## COURSE FEES

Additional Course Fees: none

## DISCLAIMER

This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

## DAILY COURSE SCHEDULE:

**THE LECTURE SCHEDULE IS TENTATIVE, BUT EXAM DATES WILL NOT CHANGE (exam dates will be added once decided by the school)**

**Timing for each assignment:** PLA: 20 minutes; Weekly quiz: 1 hour; Weekly ACHIEVE HW: 1.5-3 hours/week; Worksheet quiz: 30 minutes

Page numbers for books are approximate. Reading time varies per student, but usually each section of assigned reading takes 30 minutes to an hour.

Class date	Topic and chapters (based on 9 <sup>th</sup> ed Silberberg)	Quiz/worksheet quiz/ Discussions Quiz = 1 hour Discussion and worksheet quiz: 1 - 2 hours	PLA due Time for assignment: 20 minutes	ACHIEVE HW Ebook page #s Time for HW: 0.5 to 1 hr	OER pdf page #s
Jan 13 (M)	Introduction & Review			2-58	14-47
Jan 15 (W)	Dimensional analysis, naming		PLA 1	72-97	71-103
Jan 17 (F)	The mole, molecular and empirical formulas (ch 3)		PLA 2	108-117	118-136, 195-96
Jan 20 (M) No classes (Martin Luther King Jr Holiday)					
Jan 21 (T)	Study and do paper worksheet ch 1 and 2	Discussion 1 (ch 1-2)			
Jan 22 (W)	Reactions and stoichiometry (ch 3)	Worksheet quiz 1	PLA 3	117-148	160-165, 180-195
Jan 24 (F)	Solution concentration, M, dilutions (ch 4)	Quiz 1 (ch 1-2)	PLA 4	164-169	136-143, 166-180
Jan 27 (M)	Net ionic equations and precipitation reactions (ch 4)		PLA 5	169-178	166-69
Jan 28 (T)	Study and do paper worksheet ch 3/4	Discussion 2 (ch 3/4)			
Jan 29 (W)	Acid-base reactions (ch 4)	Worksheet quiz 2	PLA 6	178-195	170-74

Jan 31 (F)	Redox reactions and reversibility (ch 4)	Quiz 2 (ch 3/4)	PLA 7	186-195	174-178
Feb 3 (M)	Overview of gases, P, gas laws (ch 5)		PLA 8	206-211	416-434
Feb 4 (T)	Study and do paper worksheet ch 4/5	Discussion 3 (ch 4/5)			
Feb 5 (W)	Rearrangement of ideal gas law (ch 5)	Worksheet quiz 3	PLA 9	211-225	434-448
Feb 7 (F)	KMT and real gases (ch 5)	Quiz 4 (ch 4/5)	PLA 10	225-233	448-461
Feb 10 (M)	Review ch 1-5		PLA 11		Ch 1-5
Feb 11 (T)	Review ch 1-5	Discussion review			
Feb 12 (W)	Forms of energy, enthalpy (ch 6)	No worksheet quiz	PLA 12	246-251	211-220
Feb 14 (F)	Calorimetry: Constant P, constant V (ch 6)	No quiz	PLA 13	251-259	221-232
Feb 17 (M)	Stoichiometry of thermochemical rxn, Hess's Law, $\Delta H$ of formation (ch 6)		PLA 14	259-274	233-246
Feb 18 (T)	Study and do paper worksheet ch 6	Discussion 4 (ch 6)			
Feb 19 (W)	Nature of light (ch 7)	Worksheet quiz 4	PLA 15	284-296	259-274
Feb 21 (F)	Quantum mechanical model of atom (ch 7)	Quiz 5 (Ch 6)	PLA 16	296-318	274-286
Feb 24 (M)	Electron configuration and quantum mechanical model (ch 8)		PLA 17	331-344	287-295
Feb 25 (T)	Study and do paper worksheet ch 7/8	Discussion 5 (ch 7/8)			
Feb 26 (W)	Trends in atomic properties (ch 8)	Worksheet quiz 5	PLA 18	344-361	295-303
Feb 28 (F)	Ionic bonding model (ch 9)	Quiz 6 (ch 7 and 8)	PLA 19	374-385	313-322, 340-343

Mar 3 (M)	Covalent bonding model and bond energy (ch 9)		PLA 20	385-392	336-340
Mar 4 (T)	Study and do paper worksheet ch 8/9	Discussion 6 (ch 8/9)			
Mar 5 (W)	Discussion over ch 6-9	Worksheet quiz 6 Quiz 7 (ch 9)	PLA 21		
Mar 7 (F)	Electronegativity and bond polarity (ch 9)		PLA 22	389-392	354-357
Mar 10 (M)	Lewis structures, resonance, formal charge (ch 10)		PLA 24	402-410	322-336
Mar 11 (T)	Study and do paper worksheet ch 10	Discussion 7 (ch 10)			
Mar 12 (W)	VSEPR (ch 10)	Worksheet quiz 7	PLA 25	410-422	343-354
Mar 14 (F)	Molecular shape and polarity (ch 10)	Quiz 8 (ch 10)	PLA 26	422-429	343
<b>March 17-21 No Classes (SPRING BREAK)</b>					
Mar 24 (M)	Valence bond theory, modes of orbital overlap, sigma and pi bonds (ch 11)		PLA 27	440-452	376-393
Mar 25 (T)	Study and do paper worksheet ch 11	Discussion 8 (ch 11)			
Mar 26 (W)	Molecular orbital theory (MO) (ch 11)	Worksheet quiz 8	PLA 28	452-469	393-407
Mar 28 (F)	Physical states; phase changes, heating curve calculations (ch 12)	Quiz 8 (Ch 11)	PLA 29	480-492	487-510
Mar 31 (M)	Intermolecular forces (ch 12)		PLA 30	492-503	476-487
Apr 1 (T)	Study and do paper worksheet ch 12	Discussion 9 (ch 12)			
Apr 2 (W)	The solid state: structure, properties, and bonding (ch 12)	Worksheet quiz 9	PLA 31	503-517	510-533



Apr 4 (F)	Types of solutions; intermolecular forces (ch 13)	Quiz 9 (ch 12)	PLA 32	530-543	548-555
Apr 7 (M)	Review chapter 10-12		PLA 33		
Apr 8 (T)	Study and review ch 10-12	Discussion review			
Apr 9 (W)	Why dissolve, Solubility as an equilibrium process (ch 13)		PLA 34	543-550	555-563
Apr 11 (F)	Colligative properties, structure and properties of colloids (ch 13)		PLA 35	550-554	564-591
Apr 14 (M)	Chemical kinetics, reaction rate, rate law and components (ch 16)		PLA 36	566-577	600-614
Apr 15 (T)	Study and do paper worksheet ch 13	Discussion 10 (ch 13)			
Apr 16 (W)	Integrated rate laws (ch 16)	Worksheet quiz 10	PLA 37	577-584	614-625
Apr 18 (F)	Chem kinetics theories, catalysis, reaction mechanisms (ch 16)	Quiz ch 13	PLA 39	584-595	625-641
Apr 21 (M)	Chem kinetics theories, catalysis, reaction mechanisms (ch 16)	Quiz ch 13	PLA 40	584-595	625-641
Apr 22 (T)	Study and do paper worksheet ch 12	Discussion 11 (ch 16)			
Apr 23 (W)	Review ch 13-16	Quiz ch 16; worksheet quiz 11			Final Class!
Apr 24-25 are Reading Days (No Classes)					
Apr 26-May 2		Final exam (TBD)			cumulative