

# CHM2045 GENERAL CHEMISTRY I

FALL 2024; MONDAY/WEDNESDAY/FRIDAY (MWF) PERIODS 1 AND 3

Period 1 sections: 10748, 10749, 10769, 10770, 10771, 10772

Period 3 sections: 10903, 10904, 10905, 10923, 10924, 10925

## TABLE OF CONTENTS

<b>Instructor Information</b> .....	3
Teaching Assistants .....	3
Course delivery/meeting times.....	3
Required & Recommended Course Materials .....	3
Textbook (online ebook with hw; required in full) .....	3
Calculator (required, must purchase) .....	4
Course Communications .....	4
General Questions .....	4
Private or Grade-Related Questions.....	4
Course Policies.....	4
Assignment Due Dates .....	4
Pre-Lecture Video (PLV).....	5
Canvas Homework and ACHIEVE.....	<b>Error! Bookmark not defined.</b>
Discussion Sessions & Worksheets .....	5
ACHIEVE .....	5
iclicker .....	5
Canvas Quizzes.....	5
Exams .....	6
Progress Exam “Average/Replace” Policy .....	6
Posted Grade Disputes.....	6
Attendance, Extension Requests.....	6
WORKLOAD .....	7
Grading .....	7
Grade policy.....	7
General Information.....	9
Prerequisites .....	9
Course Description and Goals .....	9
First Days.....	9
General Education Objectives and Learning Outcomes .....	9

Course learning outcomes .....	10
University Policies .....	10
Students Requiring Accommodations.....	10
University Policy on Academic Misconduct .....	11
In-class Recording .....	11
Campus Resources .....	12
1. U Matter, We Care: .....	12
2. Counseling and Wellness Center:.....	12
3. Student Health Care Center:.....	12
4. University Police Department:.....	12
5. UF Health Shands Emergency Room / Trauma Center: .....	12
6. GatorWell Health Promotion Services: .....	12
Academic Resources .....	12
1. E-learning technical support:.....	12
2. Career Connections Center: .....	12
3. Library Support:.....	12
4. Academic Resources Center: .....	12
5. Writing Studio: .....	13
6. Student Complaints On-Campus: .....	13
7. On-Line Students Complaints: .....	13
Feedback .....	13
Getting Help .....	13
Inclusive Learning Environment.....	13
Course Fees .....	13
<b>DAILY COURSE SCHEDULE (</b> .....	13
Disclaimer .....	18

## INSTRUCTOR INFORMATION

Instructor	Email/Office/Phone	Student Hours
<b>Dr. Martina Sumner</b> Associate Instructional Professor  I value your input regarding making this course more accessible and inclusive. Please reach out with suggestions.	Email in Canvas preferred <a href="mailto:m.sumner@chem.ufl.edu">m.sumner@chem.ufl.edu</a> 352-392-0517 Leigh Hall 404	MWF 10:40 to 11:25 am, W 12:30 to 1:30  All student hours will meet in 300 Leigh Hall  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.

## TEACHING ASSISTANTS

Grad TAs: TBA

Email: TBA

Student hours: TBA

Undergraduate TAs: TBA

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

## COURSE DELIVERY/MEETING TIMES

- face-to-face in CLB130 MWF
- discussion section (Tuesday class) in-person
- Exams (DTE – evening assembly exams), periods E2-3 (8:20 to 10:20 PM)

## REQUIRED & RECOMMENDED COURSE MATERIALS

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

Listed below you will find the Macmillan Learning ISBN 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>)

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 MacMillian 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 good calculator, has quadratic functions and is most like TI-83 (II-83 or 84 not allowed), need logarithmic functions

#### 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.

#### 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

## PRE-LECTURE VIDEO (PLV)

- PLVs prepare you for that day's class (may be helpful to read the appropriate pages in a chemistry book first 10-30 pages per lecture depending on material – see daily schedule)
- Time to completion: 1 to 2 hours
- 3 attempts, highest one will count
- Due before class so you are ready for class.
- 3 of the PLVs will be dropped before calculating your overall grade

## DISCUSSION SESSIONS & WORKSHEETS

- Tuesday discussion class (in-person)
- Paper version available under Modules, suggestion: do before attending your Tuesday class
- Time to completion: 0.5 to 2 hours (does not include attendance at Tuesday class)
- 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 similar to exam problems and prepare you for the actual exam.

## ACHIEVE

- HW in ACHIEVE for each class day
- Time to completion: 0.5 to 1 hour
- Multiple attempts
- 3 assignments dropped in this category

## IClicker

- Keeps you engaged and active in the classroom
- Time to completion: none (in class participation)
- 3 days (about 9 points) are dropped before calculating your final iclicker grade

## CANVAS QUIZZES

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

- One timed attempt

## 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
- Use a non-graphing, non-programmable scientific calculator
- Turn your cell phones and other electronic devices off and keep in your bag.

---

## PROGRESS EXAM “AVERAGE/REPLACE” POLICY

- Applies to all students.
- No dropped progress exam.
- Average/replace policy (lowest of the 3 progress exams replaced by the average of

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 CANVAS 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).

## POSTED GRADE DISPUTES

- In writing via email to instructor
- Within one week of posting grade

## 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/#absencestext> ). 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.

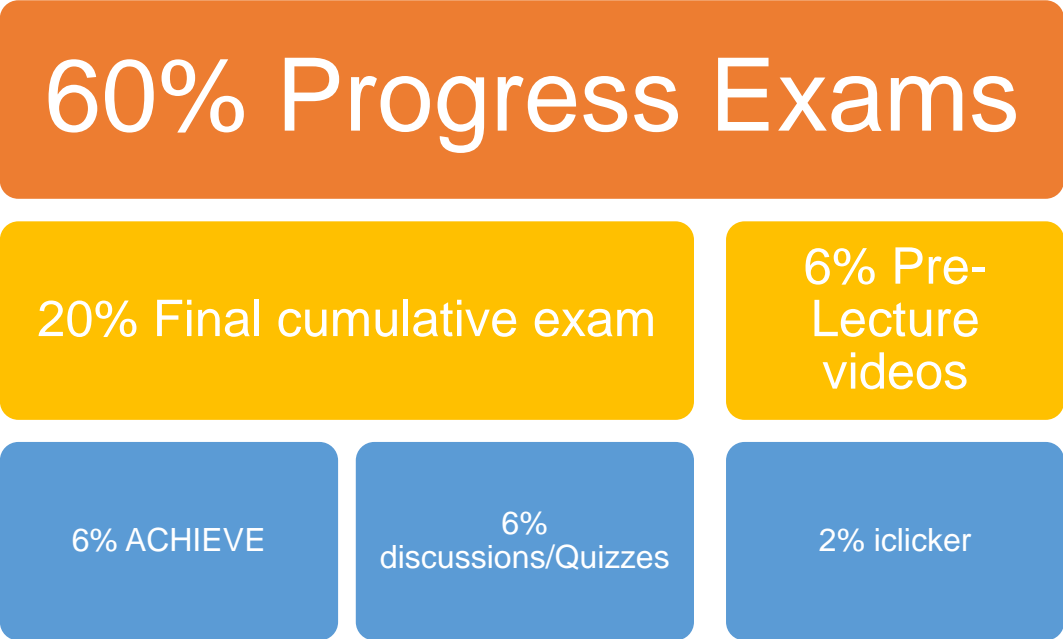
## WORKLOAD

- 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 hour for chm2045 = minimum of 6 hours per week)

## 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](#).



**Figure 1: Chart of assignment weights**

Assignments weights are as follows:

Assignment Group	Weight %
Progress Exams	60%
Final Cumulative Exam	20%
Achieve Homework	6%
IClicker	2%
Pre-Lecture Video	6%
Discussion/Worksheets AND weekly Quizzes	6%
<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).

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.

### 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

## 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

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).

#### 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

- ❖ Class is recorded and is available for viewing via mediasite (link is on the bottom of the home page)

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

**DAILY COURSE SCHEDULE: the lecture schedule is tentative, but exam dates will not change**

Class date	Topic	Quiz/wksheet/ Discussions Quiz = 1 hour Discussion and wksheet quiz: 1 - 2 hours	PLVideo Time for assignment: 60 to 90 minutes/ video	ACHIEVE HW Time for HW: 0.5 to 1 hr	Interactive General Chemistry 2.0 Chapters*
Fri 8/23	Introduction & Review				Ch. 1-3
Mon 8/26	Dimensional analysis, naming				Ch. 1-3
Tues 8/27	No discussions				
Wed 8/28	The mole, molecular and empirical formulas		Stoichiometry day 1		Ch. 3, 4
Thurs 8/29	Finish ALEKS				
Fri 8/30	Reactions and stoichiometry	Quiz over ch 1-2	Stoichiometry day 2		Ch. 3, 4
<b>Mon 9/2</b>	<b>HOLIDAY – no class</b>				
Tues 9/3	Discussion over ch 1, 2, and 3	Worksheet 1 ch 1-3			Ch 1, 2, 3
Wed 9/4	Solution concentration, M, dilutions	Wksheet quiz 1	3 types of rxn day 1		Ch. 4.1
Thurs 9/5					
Fri 9/6	Net ionic equations and precipitation reactions	Quiz ch 3	3 types of rxn day 2 (ppt)		Ch. 4.2
Mon 9/9	Acid-base reactions		3 types of rxn day 3 (acid/bases)		Ch. 4.3

Tues 9/10	Discussion over stoichiometry		Worksheet 2 ch 3		Ch 3
Wed 9/11	Redox reactions and reversibility	Wksheet quiz 2	3 types of rxn day 4 (ppt)		Ch. 4.4-6
Thurs 9/12					
Fri 9/13	Overview of gases, P, gas laws	Quiz ch 4	Gases day 1		Ch. 5.1-3
Mon 9/16	Rearrangement of ideal gas law		Gases day 2		Ch. 5.4
Tues 9/17	Discussion over ch types of chem rxn	Worksheet 3 ch 4			Ch 4
Wed 9/18	KMT and real gases	Wksheet quiz ch 4	Gases day 3		Ch. 5.5-6
Thurs 9/19	Study for exam 1				
Fri 9/20	Forms of energy, enthalpy	Quiz ch 5	Thermochemistry day 1		Ch 6.1-2
Mon 9/23	Review ch 1-5				Ch 1-5
Tues 9/24	Discussion over gases ch 5	Worksheet 4 ch 5			Ch 5
<b>Sept. 24</b>	<b>Exam 1 (Ch. 1-5) Tuesday</b>				<b>Cumulative</b>
Wed 9/25	Calorimetry: Constant P, constant V		Thermochemistry day 1		Ch. 6.3
Thurs 9/26					
Fri 9/27	Stoichiometry of thermochemical rxn, Hess's Law, $\Delta H$ of formation		Thermochemistry day 1		Ch. 6.4-6
Mon 9/30	Nature of light		Light energy day 1		Ch. 7.1
Tues 10/1	Discussion over ch 6		Worksheet 5 ch 6		Ch. 6
Wed 10/2	Quantum mechanical model of atom	Wksheet quiz ch 6	Quantum day 1		Ch. 7.4

Thurs 10/3					
Fri 10/4	Electron configuration and quantum mechanical model	Quiz ch 6 and 7	Electron configu day 1		Ch. 8.1-2
Mon 10/7	Trends in atomic properties		Periodic trends day 2		Ch. 8.3-4
Tues 10/8	Discussion over ch 7 and 8		Worksheet 6 ch 6 and 7		
Wed 10/9	Ionic bonding model	Wksheet quiz	Bonding day 1		Ch. 9.1-2
Thurs 10/10	Study for exam 2				
Fri 10/11	Covalent bonding model and bond energy	Quiz ch 8	Covalent bonding day 2		Ch. 9.3-4
Mon 10/14	Electronegativity and bond polarity		EN bond polarity day 3		Ch. 9.5-6
Tues 10/15	Discussion over ch 9	Worksheet 7 ch 8			Ch 8
<b>Tues Oct. 15</b>	<b>Exam 2 (ch 6-9) cumulative</b>				<b>cumulative</b>
Wed 10/16	Lewis structures, resonance, formal charge		Lewis stru day 1		Ch. 10.1
Thurs 10/17					
Fri 10/18	Homecoming no class				
Mon 10/21	VSEPR		VSEPR day 2		Ch. 10.2
Tues 10/22	Discussion over ch 10				
Wed 10/23	Molecular shape and polarity	Wksheet quiz ch 10	Polarity day 3		Ch. 10.3
Thurs 10/24			Worksheet 10		Ch 10
Fri 10/25	Valence bond theory, modes of orbital overlap	Quiz ch 10	VB day 1		Ch. 11.1-2



Mon 10/28	Molecular orbital theory (MO)		MO day 2		Ch. 11.3
Tues 10/29	Discussion over ch 10 and 11				
Wed 10/30	Physical states; phase changes, heating curve calculations	Wksheet quiz ch 11	Heating curve day 1		Ch. 12.1-2
Thurs 10/31			Worksheet ch 11		
Fri 11/1	Intermolecular forces	Quiz ch 11	Phase changes day 2		Ch. 12.3-5
Mon 11/4	The solid state: structure, properties, and bonding		Solids day 3		Ch. 12.6
Tues 11/5	discussion over ch 12				
Wed 11/6	Types of solutions; intermolecular forces	Wksheet quiz ch 12	Solutions day 1		Ch. 13.1-3
Thurs 11/7					
Fri 11/8	Why dissolve, Solubility as an equilibrium process	Quiz ch 12	Solutions day 2		Ch 13.4-5
Mon 11/11	Holiday no class				
Tues 11/12	No discussion				
Wed 11/13	No class office hours instead				
Nov 13	<b>Exam 3 (ch 10-12) Nov 16 cumulative wednesday</b>				cumulative
Thurs 11/14					
Fri 11/15	Colligative properties, structure and properties of colloids		Colligative properties day 3		Ch 13.6-7

Mon 11/18	Chemical kinetics, reaction rate, rate law and components		Kinetics day 1		Ch. 16.1-3
Tues 11/19	Discussion over ch 13				
Wed 11/20	Integrated rate laws	Wksheet quiz	Kinetics day 2		Ch. 16.4
Thurs 11/21					
Fri 11/22	Reaction mechanisms	Quiz ch 13	Kinetic day 3		Ch 16.6
11/25 -11/29	Thanksgiving week no class				
Mon 12/2	Theories of chemical kinetics and catalysis		Kinetics day 4		Ch 16.5/7
Tues 12/3	Discussion over ch 16				
Wed 12/4	Review	Quiz ch 16 and wksheet quiz			
Saturday, Dec. 7	Final exam (10 to 12 pm)				cumulative

\*The topics that will be covered from each chapter will be selective and announced on canvas via an announcement.

**Holidays (no classes):** Monday, September 2 (Labor Day), Monday, November 11 (Veterans Day), Thanksgiving break (Nov. 25- 29)

## 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.