CHM2045 GENERAL CHEMISTRY I

SPRING 2024; TUESDAY P2-3 AND THURSDAY P3

INSTRUCTOR INFORMATION

Instructor	Email/Office	Student (Office) Hours
Dr. Ashlyn Hale Assistant Instructional Professor I value your input regarding making this course more accessible and inclusive. Please reach out with suggestions.	Email in Canvas preferred ashlyn.rose.hale@chem.ufl.edu CLB 412D	**Tuesdays and Thursdays Period 4**, in addition by appt via zoom All student hours will meet in **258 Keene-Flint Hall** (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.

TEACHING ASSISTANTS

Grad TAs: Grayce Dyer, Erik Ferenczy
Email: graycedyer@whitney.ufl.edu; erikferenczy@chem.ufl.edu
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 T (P2-3) and R (P3)
- discussion section (Monday class) in-person; see your course schedule for room assignments and specific times
- Exams in-person only (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)

The text Chemistry: The Molecular Nature of Matter and Change, 9th ed., Silberberg & Amateis (McGraw Hill) is required. Access to the textbook is via the ALEKS platform, accessed through a link in your Canvas course. A portion of your grade may stem from

electronic homework (ALEKS) via the same link. You must purchase ALEKS360 (both the text and electronic homework) for the course. This includes access for the ALEKS Prep for CHM2045 at no additional charge to you.

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 ALEKS 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.

A paperback version of the text is completely optional. The bookstore may stock paper versions of the text, or you can order one directly through the McGraw Hill website. A paper version is on reserve at the Marston Science Library for reference purposes.

All other assigned material will be available through Canvas.

ALEKS PREP FOR CHM2045 (REQUIRED IN FULL; NO CHARGE)

To prepare you for this course we are providing you with this free ALEKS prep- this is **different** from our class ALEKS portal for assigned homework. It is worth **2% of your course grade.** We recommend you complete this prep before the first day of class (**ALEKS prep due January 26**). Detailed information is provided on our ALEKS information page. **You will need to complete the ALEKS prep for the specific semester you are enrolled. Note: if you are retaking the class, you still need to take the new ALEKS prep for this current term.**

% ALEKS complete	<70%	70 - <80%	80 - <90%	90 - <99%	99 – 100%
% grade earned	0%	0.5%	1.0%	1.5%	2%

CALCULATOR (REQUIRED, MUST PURCHASE)

- TI-36 good calculator, has quadratic functions and is most like TI-83, but you can use others; need logarithmic functions; no programmable or graphing calculators are allowed

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 try to come up with a solution. All ALEKS assignments are due when the ALEKS website states. Canvas and ALEKS don't sync too often to update ALEKS due dates. To get the most out of these assignments they need to be completed on time to keep your learning material on track.

PRE-LECTURE ASSIGNMENTS (PLA)

- PLAs prepare you for that day's class (read the assigned sections in the book, work the sample problems in the book, then attempt PLA)
- 3 attempts, highest one will count
- Due before class so you are ready for class.
- 3 of the PLA assignments will be dropped before calculating your overall grade

ALEKS OPT HW (OPTIONAL/FOR PRACTICE)

Several optional homework assignments are available for each chapter to help you understand the material. The homework is posted in ALEKS but is also accessible via 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) in the textbook.

DISCUSSION SESSIONS & WORKSHEETS

- Monday discussion class (in-person)
- Paper version of worksheet available under the “Worksheet” Module in the Modules tab on Canvas; suggestion: **do before attending your discussion section**
- Attendance and participation in discussion will earn you 5 points.
- Tuesday worksheet quiz on Canvas will earn you 5 points (3 attempts, unlimited time for each attempt)
- Grade discrepancies: address to your grad TA within one week
- One assignment will be dropped from this category.

Worksheet problems are similar to exam problems and prepare you for the actual exam.

ALEKS HOMEWORK (HW)

- HW in ALEKS for each period of class
- Time to completion: 0.5 to 2 hours
- Multiple attempts
- Three assignments dropped in this category.

ICLICKER

- Keeps you engaged and active in the classroom.
- 3 days (about 15 points) are dropped before calculating your final iClicker grade.

CANVAS QUIZZES

- Most difficult of the assignments
- Prepares you for the actual exam in a low stakes yet similar environment as Exams (timed and 1 attempt)
- Chapter progress quiz (available for 48 hours), usually available Thursday and due Friday
- One timed attempt

EXAMS

- Exams are at night (8:20 to 10:20 PM) during E2-3 periods (DTE -During Term Exams); Exam dates in the schedule (at the end of the syllabus)
- Scantrons, formula sheet, and blank scratch paper are provided
- Bring identification, calculator, pencils, and eraser
    - The only calculators allowed are non-graphing and non-programmable
- 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 the 3 exams); see below for an example

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

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

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.
- Assignments weights are as follows:

Assignment Group	Weight %
Progress Exams	57%
Final Cumulative Exam	23%
ALEKS Prep	2%
ALEKS Homework	3%
Quizzes	6%
iClicker	1%
PLAs	3%
Discussion/Worksheets	5%
TOTAL	100%

Pie chart of assignment weights next page.

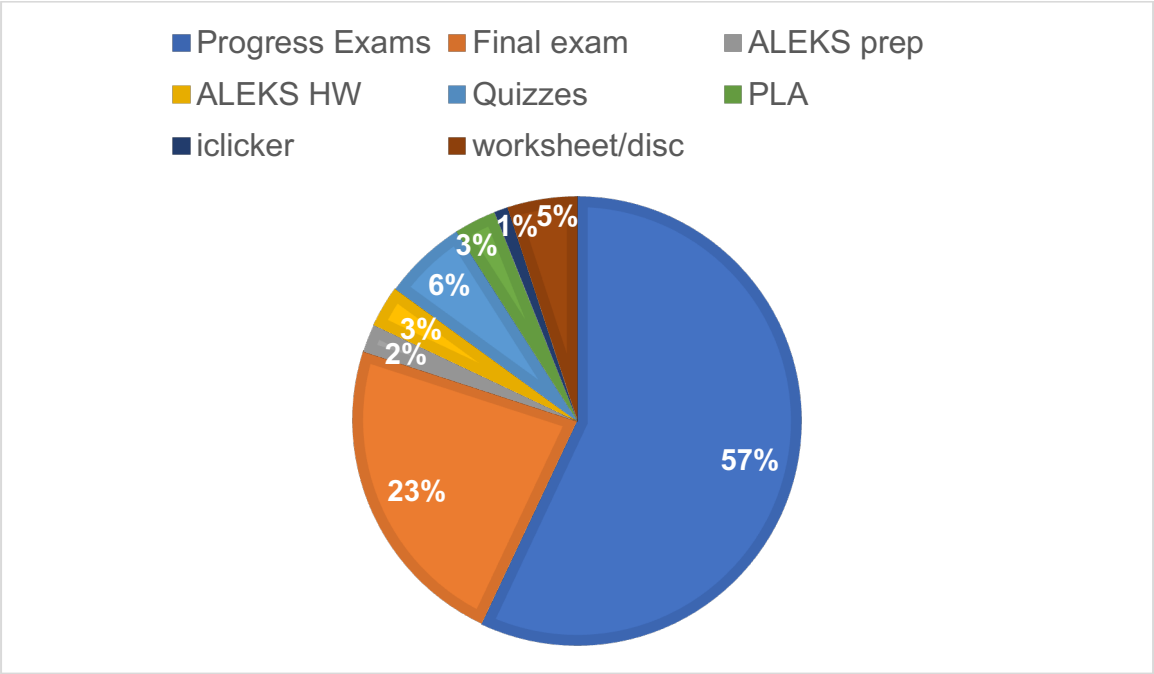

Figure 1: Pie chart of assignment weights

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.

Specifically, students will be able to:

1. Describe the classification, properties, types, and of changes of matter. Characterize a compound as ionic or molecular including being able to predict formulas for, and naming of, ionic compounds, molecular compounds and molecular acids.
2. Analyze and solve chemical problems, involving unit conversions, which may include applications in reaction stoichiometry, thermochemistry, molarity, gas laws and kinetics.
3. Analyze physical processes in chemical sciences, and identify the principles to those processes to make predictions of chemical behavior. This may include gases, kinetics, thermodynamics and equilibria.
4. Describe the principles of quantum theory and use to evaluate atomic and molecular structure, periodic trends, and bonding theories.
5. Describe and differentiate between the different types of intermolecular forces; describe the properties of the liquid and solid states.
6. Clearly communicate in writing information derived from course related readings about the major concepts and themes in the chemical sciences.

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
- **Complete the ALEKS Prep before the deadline**

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.

The course objectives align with the UF General Education student learning outcomes and physical science area learning outcomes:

General Education SLO	Physical Science SLO	Course Objective Alignment	Assessment
Content	Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.	Objectives 1-6	All assessments and student practice assignments offer opportunities for students to demonstrate content knowledge.
Critical Thinking	Formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes.	Objectives 1-6	Pre-lecture assignments (PLA), discussion class (worksheet), worksheet quiz on canvas, weekly quiz
Communication	Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.	Objective 3-6	Weekly discussion class, worksheet quiz on canvas

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MODULE LEVEL LEARNING OUTCOMES

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

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. 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 home page in Canvas)

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, 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.
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/worksheet** **Quiz = Fri** **Worksheet = Wed**	**PLA/worksheet**	**ALEKS HW**	**Silberberg 9th Chapters***
Mon 1/8	No discussions		**Finish ALEKS prep**		
Tues 1/9	Introduction, Chapters 1 & 2 Review	Finish ALEKS	**Finish ALEKS prep**		Ch. 1-2
Thurs 1/ 11	Dimensional analysis, naming The mole, molecular and empirical formulas		Worksheet ch 1-2 **Finish ALEKS prep**		Ch. 3.1-3
Fri 1/12		Quiz Ch. 1-2	**Finish ALEKS prep**		
Mon 1/15	**HOLIDAY – no discussion**				
Tues 1/16	Reactions and stoichiometry Solution concentration, M, dilutions	Worksheet ch 1-2 quiz	PLA ch 3.4 PLA ch 4.1 **Finish ALEKS prep**	Ch 3.1-3	Ch. 3.4 Ch. 4.1
Thurs 1/18	Net ionic equations and precipitation reactions		PLA ch 4.2 **Finish ALEKS prep**		Ch. 4.2
Fri 1/19		Quiz Ch. 3	**Finish ALEKS prep**		
Mon 1/22	Discussion over ch 1-3		Worksheet ch 3 **Finish ALEKS prep**	Ch 3.4 Ch 4.1	
Tues 1/23	Acid-base reactions Redox reactions and reversibility	Worksheet ch 3 quiz	PLA ch 4.3 PLA ch 4.4-6 **Finish ALEKS prep**		Ch. 4.3 Ch. 4.4-6

Thurs 1/25	Overview of gases, P, gas laws		PLA ch 5.1-3 **Finish ALEKS prep**	Ch 4.2	Ch. 5.1-3
Fri 1/26	**ALEKS prep due**			**ALEKS prep due**	
Mon 1/29	Discussion over ch 4		Worksheet ch 4		Ch 4
Tues 1/30	Rearrangement of ideal gas law KMT and real gases	Worksheet ch 4 quiz	PLA ch 5.4 PLA ch 5.5-6	Ch 4.3 Ch 4.4-6	Ch. 5.4 Ch. 5.5-6
Thurs 2/1	Review ch 1-4		PLA ch 1-4	Ch 5.1-3	Ch 1-4
Fri 2/2		Quiz Ch. 4			
Mon 2/5	**Exam 1 (Ch. 1-4)**			**Cumulative**	
Mon 2/5	Discussion as exam review				
Tues 2/6	Forms of energy, enthalpy Calorimetry: Constant P, constant V		PLA ch 6.1-2 PLA ch 6.3	Ch 5.4 Ch 5.5-6	Ch 6.1-2 Ch. 6.3
Thurs 2/8	Calorimetry: Constant P, constant V		PLA ch 6.4-6		Ch. 6.3
Fri 2/9		Quiz Ch 5			
Mon 2/12	Discussion over ch 5		Worksheet ch 5		
Tues 2/13	Stoichiometry of thermochemical rxn, Hess's Law, ΔH of formation Review ch 6	Worksheet ch 5 quiz		Ch 6.1-2 Ch 6.3	Ch. 6.4-6 Ch 6
Thurs 2/15	Nature of light		PLA ch 7.1		Ch. 7.1
Mon 2/19	Discussion over ch 6		Worksheet ch 6		
Tues 2/20	Quantum mechanical model of atom Electron configuration and quantum mechanical model	Worksheet ch 6 quiz	PLA ch 7.4 PLA ch 8.1-2	Ch 6.4-6	Ch 7.4 Ch. 8.1-2
Wed 2/21		Quiz Ch 6			
Thurs 2/22	Trends in atomic properties		PLA ch 8.3-4	Ch 7.1	Ch. 8.3-4

Fri 2/23					
Mon 2/26	Discussion over ch 7/8 & review		Worksheet ch 7/8	Ch 7.4 Ch 8.1-2	
Tues 2/27	Ch 8 review with Electronegativity and metallic bonding Ionic bonding model	Worksheet ch 7/8 quiz	PLA ch 9.1-2 PLA ch 9.5-6		Ch 8 Ch. 9.5-6 Ch. 9.1-2
Wed 2/28		Quiz Ch 7/8		Ch 8.3-4	
Thurs 2/29	**Exam 2 (ch 5-8)**		PLA ch 5-8		**cumulative**
Thurs 2/29	Review ch 5-8				
Mon 3/4	No discussion				
Tues 3/5	Covalent bonding model, bond energy, bond polarity Lewis structures, resonance, formal charge		PLA ch 9.3-4/5 PLA ch 10.1	Ch 9.1-2	Ch. 9.3-5 Ch. 10.1
Thurs 3/7	Lewis structures, resonance, formal charge (continued)				Ch. 10.1
Fri 3/8		Quiz Ch 9			
	Spring Break 3/11 thru 3/15				
Mon 3/18	Discussion over ch 9		Worksheet ch 9	Ch. 9.3-4 Ch. 9.5-6	Ch. 10
Tues 3/19	VSEPR Molecular shape and polarity	Worksheet ch 9 quiz	PLA ch 10.2 PLA ch 10.3		Ch 10.2 Ch 10.3
Thurs 3/21	Valence bond theory, modes of orbital overlap		PLA ch 11.1-2	Ch 10.1	Ch. 11.1-2
Fri 3/22		Quiz ch 9			
Mon 3/25	Discussion over ch 10		Worksheet ch 10		
Tues 3/26	Molecular orbital theory (MO) Intermolecular forces	Worksheet ch 10 quiz	PLA ch 11.3 PLA ch 12.3	Ch 10.2 Ch 10.3	Ch. 11.3 Ch. 12.3

Thurs 3/28	Physical states; phase changes, heating curve calculations		PLA ch 12.1-2	Ch. 11.1-2	Ch. 12.1-2
Fri 3/29		Quiz Ch 10			
Mon 4/1	discussion over ch 11		Worksheet ch 11		
Tues 4/2	Properties of liquid state and uniqueness of water The solid state: structure, properties, and bonding	Worksheet ch 11 quiz	PLA ch 12.4-6	Ch 11.3 Ch 12.3	Ch 12.4-5 Ch. 12.6
Thurs 4/4	Review ch 9-12		PLA ch 12	Ch 12.1-2	Ch. 9-12
Fri 4/5		Quiz Ch 11			
Mon 4/8	discussion over ch 12 and exam review		Worksheet ch 12	Ch 12.4-5 Ch 12.6	
Tues 4/9	Types of solutions; intermolecular forces Why dissolve, Solubility as an equilibrium process	Worksheet ch 12 quiz Quiz Ch 12	PLA ch 13.1-3 PLA ch 13.4-5		Ch. 13.1-3 Ch 13.4-5
Wed 4/10	**Exam 3 (ch 9-12) cumulative**				**cumulative**
Thurs 4/11	Colligative properties, structure and properties of colloids		PLA ch 13.6-7		Ch 13.6-7
Mon 4/15	Discussion over ch 13		Worksheet ch 13		Ch 13
Tues 4/16	Chemical kinetics, reaction rate, rate law and components Integrated rate laws	Worksheet ch 13 quiz	PLA ch 16.1-3 PLA ch 16.4	Ch 13.1-3 Ch 13.4-5	Ch. 16.1-3 Ch. 16.4
Thurs 4/18	Reaction mechanisms		PLA ch 16.6	Ch 13.6-7	Ch 16.6
Fri 4/19		Quiz Ch 13			
Mon 4/22	Discussion over ch 16		Worksheet ch 16		Ch 16
Tues 4/23	Theories of chemical kinetics and catalysis Ch 13-16 review	Worksheet ch 16 quiz	PLA ch 16.5/7	Ch 16.1-3 Ch 16.4	Ch 16.5/7 Ch 13-16 review
	CONTINUES ON NEXT PAGE				

Wed 4/24		Quiz Ch 16		Ch 16.5/7	
Mon 4/29	**Final exam 12:30 to 2:30 pm**				**cumulative**

*The topics that will be covered from each chapter will be selective and posted on Canvas.

Holidays (no classes): Monday, January 15 (Martin Luther King Jr. Day), Spring Break (Monday, March 11 through 15)

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.