

**South Plains College**  
**Common Course Syllabus: CHEM 1411**  
**Revised Fall 2020**

**Department:** Science

**Discipline:** Chemistry

**Course Number:** CHEM 1411

**Course Title:** General Chemistry I

**Instructor:** Katheryn Townsend

Office: Technical Arts 229

Phone: 806-716-2310

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Office Hours: **VIRTUAL ONLY** – must be set up by appointment via emailing instructor

**Available Formats:** online

**Campuses:** Levelland

**Course Description:** Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry. Basic laboratory experiments supporting theoretical principles presented in CHEM 1411; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports.

**Prerequisite:** Prerequisite: MATH 1314 College Algebra or equivalent academic preparation. High school chemistry is strongly recommended

**Credit:** 4 **Lecture:** 3 **Lab:** 3

**Course Specific Instructions:** This course is completely online. Please expect to spend AT LEAST 4-6 hours per week reading, completing assignments, and exams weekly. You must be very self-disciplined to complete an online course. All assignments, worksheets, and exams etc. must be completed and submitted by their specific deadlines.

**Textbook:** Chemistry by Chang, 13<sup>th</sup> Edition, **HIGHLY RECOMMENDED**, Available at the Bookstore

**Supplies:**

- **To purchase:**

- **Textbook** – **HIGHLY RECOMMENDED**, Chemistry by Chang, 13<sup>th</sup> Edition
- **Lab Manual** – **REQUIRED**, available at the Levelland Bookstore
- **Calculator** – **REQUIRED**, must be scientific, **CELL PHONES NOT ALLOWED**
  - You will need a scientific calculator for this course. An inexpensive model will be just fine. You are responsible for learning how to use your calculator. Cell phones CAN NOT be used for calculators.
- **May need extra materials to prepare 2 posters**

- **Obtained from Blackboard:**
  - **Power Point Notes, Outlines and Videos - REQUIRED**
    - On Blackboard, each Chapter will have a folder in the Chapter Notes tab. Here you will find Power Point Notes, Outlines and Videos.
  - **Chapter Worksheets – Optional, but highly recommended**
    - These are worksheets designed to help you apply the material from the chapter and can be used to study for exams.
  - **Exam Practice Problems – Optional but highly recommended**
    - These are problems that I have designed for further practice and study before every exam.
  - **Periodic Table – REQUIRED**
  - **Labs/Experiments – REQUIRED**
    - There will be videos to give you the data collection for each experiment. The data analysis is the student's responsibility. Then there will be lab assignments for each experiment to be completed on Blackboard for a lab grade.

#### Minimum Computer Requirements:

1. Personal computer with a 1 GHz Pentium processor and at least 512 MB of RAM memory, a minimum 5 GB of free hard drive, running Windows 7 / MacOS 10.8 or later (Windows 10 / MacOS 10.12 recommended).
2. Web Browser: Google Chrome seems to work the best with Blackboard and HOL.
3. A high speed internet connection of 5+ Mbps.
4. Microsoft Office and Microsoft PowerPoint and Word software (a recent version, preferably 2016 or higher).
5. Windows Media Player (the latest version).
6. Soundcard and functioning speakers.
7. Knowledge of how to navigate Google Chrome web pages and how to deal with pop-up blockers and other devices and warnings on Google Chrome.
8. Knowledge of how to download files from the Google Chrome and find them on your computer once they are downloaded.
9. Knowledge of basic operations of Microsoft Word and Microsoft PowerPoint.
10. Knowledge of how to view and adjust videos with Windows Media Player.

**BlackBoard:** The lecture AND lab of this course is completely online and is conducted through Blackboard. BlackBoard may be accessed at <https://southplainscollege.blackboard.com/webapps/login/>. For help concerning the use and features of BlackBoard you can access the help menu at the top of each BlackBoard page that you visit. For technical issues concerning BlackBoard, contact SPC BlackBoard Student Support at the Instructional Student Support at the Instructional Technology department at [blackboard@southplainscollege.edu](mailto:blackboard@southplainscollege.edu) or 806 716-2180. Only contact them if you need assistance with login or a browser related questions. DO NOT contact them if your computer crashes, your internet connection fails, you have instructional questions for your instructor, etc. Please include your full names, course registered for with instructor and section noted, and the preferred way for them to contact you.

**Labs/Experiments:** You will perform a series of exercises for experiments based off of videos recorded by the instructor which are designed to reinforce the classroom material and give you some experience of a chemical nature. Videos will be on Blackboard and given for data collection ONLY. Data Analysis in the lab manual must be completed by the student. There will be an assignment on Blackboard for each Experiment that the student must complete for the lab grade. Should Technical Difficulties occur while you are doing a Lab Assignment, **TAKE A PICTURE OF THE SCREEN THAT IT GIVES YOU AND EMAIL THE PICTURE TO ME IMMEDIATELY!!** I **cannot guarantee** that I will reopen the Lab Assignment for you but I will take a look at it and then make a decision.

A missed lab **CANNOT** be made up and will therefore be a 0. **\*\*The only exception will be if the student has been hospitalized due to COVID-19. In that situation documentation from the hospital will be required. If you are hospitalized due to COVID-19 please contact the instructor: Katheryn Townsend at ktownsend@southplainscollege.edu, the nurse: DeEtte Edens, BSN, RN at 806-716-2376 or dedens@southplainscollege.edu, and Lynne Cleavinger, Dean of Students at 806-716-2380, Fax: 806-894-1038.\*\*** The student is still responsible for collecting any material that was given during the Experiment in order to be prepared for questions on the Exam that come from the Experiments. At the end of the semester the Instructor will automatically drop the lowest lab grade for the student.

**Experiment 1: Introduction to Laboratory Equipment** – For this Experiment, the instructor will join students into teams of 4 and send email addresses (SPC Emails only) to each team member. Each team can decide how they want to coordinate and work together to complete Experiment 1. Due to COVID-19 meeting together in person is NOT recommended, therefore some teams may decide to do Zoom meetings and work through Experiment 1 together that way while other teams may decide to divide up the work and then email all the information to each other until the Experiment is complete or you may have an entirely different idea that works great, but that decision must be determined in each team. **EACH STUDENT IS STILL REQUIRED TO SUBMIT THEIR OWN EXPERIMENT 1 ASSIGNMENT ON BLACKBOARD!** This teamwork is **REQUIRED** for Experiment 1 and encouraged (but not required) for all other experiments.

**Online Assignment:** This a **two** part assignment due close to the beginning of the semester and will count as a lab grade. There are instructions under the WELCOME tab on Blackboard but they are also in an ONLINE ASSIGNMENT tab on Blackboard. Part One consists of questions in a Word document. You will need to open the document, TYPE your answers, save as a **PDF** and then submit the **PDF** on Blackboard in the ONLINE ASSIGNMENT tab using a TurnItIn link. Part Two is to send me an email (ktownsend@southplainscollege.edu) from your South Plains College email (NOT BLACKBOARD EMAIL, YAHOO, GMAIL, ETC!) and just tell me a little about yourself, whatever you would like me to know. Each part is worth 50 points so make sure to do BOTH parts in order to get a 100. This assignment is to help me get to know you a little and make sure you can access documents on Blackboard and submit documents on TurnItIn on Blackboard. **THERE ARE NO LATE ASSIGNMENTS ACCEPTED!!** **\*\*The only exception will be if the student has been hospitalized due to COVID-19. In that situation documentation from the hospital will be required. If you are hospitalized due to COVID-19 please contact the instructor: Katheryn Townsend at ktownsend@southplainscollege.edu, the nurse: DeEtte Edens, BSN, RN at 806-716-2376 or dedens@southplainscollege.edu, and Lynne Cleavinger, Dean of Students at 806-716-2380, Fax: 806-894-1038.\*\***

**Poster Projects:** There will be TWO poster projects due this semester with the exact date being determined by the instructor. The materials needed for posters must be provided by the student and not the instructor of the course. The topic of the posters may be any topic that was covered in lecture or lab during the semester. These posters will each count as a lab grade. There is a POSTERS tab on Blackboard where you will find information about these Posters and a TurnItIn link to upload and submit your poster, **IT MUST BE SAVED AND SUBMITTED AS A PDF.**

- **Poster #1:** Due around mid-semester. They may be done by hand or they may be digitally done or a combination. If done by hand this “poster” should be no larger than a 12x12inch scrapbook page. They may be just a regular sheet of paper (8.5 x 11inch) if you would like. Just be creative and informative. They will be submitted on Blackboard so if it is done by hand the student will either need to scan the poster or take a picture of it to submit it, **IT MUST BE SAVED AND SUBMITTED AS A PDF.**
- **Poster #2:** Due at the end of the semester. They may be done by hand or they may be digitally done or a combination. If done by hand this “poster” should be no larger than a 12x12inch scrapbook page. They may be just a regular sheet of paper (8.5 x 11inch) if you would like. Just be creative and informative. They will be submitted on Blackboard so if it is done by hand the student will either need to scan the poster or take a picture of it to submit it, **IT MUST BE SAVED AND SUBMITTED AS A PDF.** This poster **CANNOT** cover the same topic as Poster #1.
- More details may be provided by the instructor on Blackboard in the POSTERS tab.

- **NO Late Posters will be accepted!!** **\*\*The only exception will be if the student has been hospitalized due to COVID-19. In that situation documentation from the hospital will be required. If you are hospitalized due to COVID-19 please contact the instructor: Katheryn Townsend at ktownsend@southplainscollege.edu, the nurse: DeEtte Edens, BSN, RN at 806-716-2376 or dedens@southplainscollege.edu, and Lynne Cleavinger, Dean of Students at 806-716-2380, Fax: 806-894-1038.\*\***

#### Major Exams:

- There will be five major exams. Each exam is worth 100 points. Questions will be based on the material covered in lecture and lab. **A missed exam will receive a score of zero. There will be NO make-ups.** **\*\*The only exception will be if the student has been hospitalized due to COVID-19. In that situation documentation from the hospital will be required. If you are hospitalized due to COVID-19 please contact the instructor: Katheryn Townsend at ktownsend@southplainscollege.edu, the nurse: DeEtte Edens, BSN, RN at 806-716-2376 or dedens@southplainscollege.edu, and Lynne Cleavinger, Dean of Students at 806-716-2380, Fax: 806-894-1038.\*\***
- Exams are 25 – 50 questions each.
- The Exams will be available for 24 hours starting from 6:00PM on the day it is scheduled until 6:00PM on the following day BUT ONCE YOU BEGIN THE EXAM:
  - You will have 1 (ONE) attempt to take the Exam, meaning, you cannot leave the Exam or Blackboard and then come back to it, once you open the Exam you must finish it!
  - You will have 2 hours to take the Exam, make sure to have your calculator and periodic table ready and you may want some scratch paper nearby as well!
  - You will be allowed to use your notes on the Exams but remember, you will be limited on time so have your notes organized and ready to go!
  - Should technical difficulties occur while you are taking the Exam, TAKE A PICTURE OF THE SCREEN THAT IT GIVES YOU AND EMAIL THE PICTURE TO ME **IMMEDIATELY!!** I cannot guarantee that I can respond to you immediately but everything will be timestamped so I can go back and see what happened and possibly (**NOT GUARANTEED**) restart the Exam for you.
- Be sure to use the Notes Outlines, Chapter Worksheets and Exam Practice Problems to help study for the Exams.

**Final Exam: THE FINAL EXAM IS REQUIRED FOR ALL STUDENTS.** The final exam is comprehensive and is worth 100 points. The final must be taken on the scheduled day. **NO** make up is available for the final since it is scheduled at the very end of the term. Extenuating circumstances will be handled on a case-by-case basis.

- **Replacement Option** – The Final Exam can replace the lowest exam score. In this option, the final ends up counting twice, by replacing one exam and counting as the final exam itself.
- **Cheating** – If a student is caught cheating (see the full definition of cheating in this syllabus and in the SPC catalog under Academic Integrity) on any of the Major Exams they will receive a 0 for that Exam. In the case of cheating, the Final Exam will NOT replace any Exam score.
- Should technical difficulties occur while you are taking the Final Exam, TAKE A PICTURE OF THE SCREEN THAT IT GIVES YOU AND EMAIL THE PICTURE TO ME **IMMEDIATELY!!** I cannot guarantee that I can respond to you immediately but everything will be timestamped so I can go back and see what happened and possibly (**NOT GUARANTEED**) restart the Exam for you.

**Computer Problems or BlackBoard or SPC Server Problems:** If a student's internet connection goes down, or a student's computer crashes or otherwise becomes inoperable for BlackBoard, it is the responsibility of the student to have their internet connection and/or computer repaired as soon as possible in order to avoid getting behind in the class or missing due dates. While the computer and/or internet connection is being repaired, the student should seek an alternate technology resources. There are computer labs on both the Levelland and Reese campuses. **Internet problems and/or the crash or inoperability of a computer will not be an acceptable excuse**

**for being late with assignments or exams. PLAN AHEAD!!** It is the responsibility of the student to have a backup plan in place. If BlackBoard or SPC server goes down, the appropriate time extensions will be determined and announced by the instructor.

**Logging into the Course:** You are not allowed to give you user ID and or/password to anyone. You will be dropped and given an **F** for your final grade if someone besides you is caught logging into this course under your user ID and/or password.

**Copyright Notice:** All material presented by the instructor in the course is copyright protected. The material presented by the instructor may not be modified or altered in any way. You have permission to print out one copy of any material presented by the instructor in this course (ex. Class information sheet, course orientation, and chapter module PowerPoint presentations). The one copy must only be used for your personal educational use during this semester. The material may not be altered or modified in any way. The material may not be distributed in any way. You have permission to download the same material to your computer hard drive or other medium in order to print out the material. Any material downloaded material may not be altered or modified in any way. The downloaded material may not be distributed in any way.

**E-Mail:** When you have questions, problems, or comments, you can send an e-mail to [ktownsend@southplainscollege.edu](mailto:ktownsend@southplainscollege.edu). I will respond to your message within 48 hours if I receive your e-mail between 8:00 AM Monday and 12:00PM Friday (excluding holidays). E-mails received during the time period lasting from 12:00PM Friday to 8:00 AM Monday of the following week will receive a response within 48 hours of that Monday (excluding holidays).

**Expectations when Corresponding:** Please be polite, courteous, and respectful when using BlackBoard messages, e-mail discussion forums, and chat rooms. Do not use profanity under any circumstances. Do not write disrespectful, insulting, mean, rude, profane, insensitive, or any other hurtful messages or comments under any circumstances. Failure to abide by this policy will result in the appropriate disciplinary actions. Students are expected to maintain a pleasant learning environment for themselves as well for their classmates. Therefore, if, in the view of the instructor, a student is disrupting the class the appropriate disciplinary action will be taken.

**Online Disclaimer:** This is to notify you that materials you may be accessing in chat rooms, messages, discussion forums or unofficial web pages are not officially sponsored by the instructor of South Plains College. The United States Constitution rights of free speech apply to all members of our community regardless of the medium used. The instructor and South Plains College disclaim all liability for data, information, or opinions expressed in these forums.

**This course partially satisfies a Core Curriculum Requirement:**

Life and Physical Sciences Foundational Component Area (030)

**Core Curriculum Objectives addressed:**

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions
- **Teamwork**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

**Student Learning Outcomes:**

- **From Lecture:**

Upon successful completion of this course, students will:

1. Define the fundamental properties of matter.
2. Classify matter, compounds, and chemical reactions.
3. Determine the basic nuclear and electronic structure of atoms.
4. Identify trends in chemical and physical properties of the elements using the Periodic Table.
5. Describe the bonding in and the shape of simple molecules and ions.
6. Solve stoichiometric problems.
7. Write chemical formulas.
8. Write and balance equations.
9. Use the rules of nomenclature to name chemical compounds.
10. Define the types and characteristics of chemical reactions.
11. Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems.
12. Determine the role of energy in physical changes and chemical reactions.
13. Convert units of measure and demonstrate dimensional analysis skills

- **From Lab:**

Upon successful completion of this course, students will:

1. Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.
2. Demonstrate safe and proper handling of laboratory equipment and chemicals.
3. Conduct basic laboratory experiments with proper laboratory techniques.
4. Make careful and accurate experimental observations.
5. Relate physical observations and measurements to theoretical principles.
6. Interpret laboratory results and experimental data, and reach logical conclusions.
7. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
8. Design fundamental experiments involving principles of chemistry.
9. Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.

**Student Learning Outcomes Assessment:** Three questions from Exams will be used to assess student learning outcomes.

**Course Evaluation:**

Exams 70%

Labs 30%

Grades will be assigned on the following basis:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
< 60	F

- Grades are recorded in the Blackboard Gradebook so that you can view them at any time. Keep in mind that as due dates pass and zeros are entered into the gradebook for missing work, averages can change drastically and quickly!

**Attendance Policy:** It is vitally important that you access this course on Blackboard at least three times a week. Students will be dropped from the course if they have failed to login and participate in the online course for 10 or more days. On day 11 of no login/activity in the class, I will administratively drop you for excessive absences, and

you will receive a grade of “F” at the end of the term, in accordance with policies set forth in the SPC General Catalog.

If you are unable to complete this course, you must initiate a withdrawal (W) through the Registrar’s Office before **NOVEMBER 19, 2020**.

**Tutor:** Online Tutoring may be available during the semester. If this is available the instructor will notify the students in the class.

**Plagiarism and Cheating:** Students are expected to do their own work on all assignments. Failure to comply with this policy will result in an F for the assignment and can result in an F for the course if circumstances warrant. If a student is caught cheating on any of the Major Exams they will receive a 0 for that Exam AND be required to take the Final Exam regardless of absences or average. In the case of cheating, the Final Exam will NOT replace ANY Exam score.

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another’s work during an examination or on a homework assignment;
8. Rewriting another student’s work in Peer Editing so that the writing is no longer the original student’s;
9. Taking pictures of a test, test answers, or someone else’s paper.

**Student Code of Conduct Policy:** Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others’ behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

**Diversity Statement:** In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

**Disability Statement:** Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in

the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

**Nondiscrimination Policy:** South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

**Title IX Pregnancy Accommodations Statement** If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To [activate](#) accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

**Campus Concealed Carry:** Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php>  
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

**COVID-19 Statement:** It is the policy of South Plains College for the Fall 2020 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation.

**If you test positive for COVID-19:** Contact the instructor AND DeEtte Edens, BSN, RN at 806-716-2376 OR [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu) for Quarantine Guidance.

**If you are hospitalized due to COVID-19:** Please contact the instructor: Katheryn Townsend at [ktownsend@southplainscolleg.edu](mailto:ktownsend@southplainscolleg.edu), DeEtte Edens, BSN, RN at 806-716-2376 or [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu), and Lynne Cleavinger, Dean of Students at 806-716-2380, Fax: 806-894-1038. Documentation may be required if assignments/exams are missed during the hospitalization period.

## EXAM OVERVIEW

### Exam 1

#### Lab Safety

**Chapter 1:** Chemistry: The Study of Change

*Learning Objective Met: Lecture #1,#2, #13*

**Chapter 2:** Atoms, Molecules, and Ions

*Learning Objective Met: Lecture #2, #3, #5, #7, #9*

**Experiment 1:** Introduction to Lab Equipment

*Learning Objectives Met: all Lab LOs*

**Experiment 2:** Measurements

*Learning Objectives Met: Lecture #1, #13, all Lab LOs*

**Experiment 3:** Density

*Learning Objectives Met: Lecture #1, #13, all Lab LOs*

**Lab Worksheet 1:** Determining Chemical Formulas and Names

*Learning Objectives Met: Lecture #2, #7, #8, #9*

**Experiment 4:** Atoms and Molecules

*Learning Objectives Met: Lecture #3, #9, all Lab LOs*

### Exam 2

**Chapter 3:** Mass Relationships in Chemical Reactions

*Learning Objective Met: Lecture #6, #7, #8, #10*

**Chapter 4:** Reactions in Aqueous Solution

*Learning Objective Met: Lecture #7, #8, #10, #12*

**Experiment 5:** Determining the Mole Ratios in a Chemical Reaction

*Learning Objectives Met: Lecture #7, #8, #12, all Lab LOs*

**Experiment 6:** Hydrates

*Learning Objectives Met: Lecture #2, #7, #12, all Lab LOs*

**Experiment 7:** Properties of Solutions: Electrolytes and Non-Electrolytes

*Learning Objectives Met: all Lab LOs*

**Lab Worksheet 2:** Precipitation Reactions

*Learning Objectives Met: Lecture #7, #8, #9, #10*

**Experiment 8:** Determine the Molar Mass by Titration

*Learning Objectives Met: Lecture #6, #7, #8, all Lab LOs*

### Exam 3

**Chapter 5:** Gases

*Learning Objective Met: Lecture #11*

**Chapter 6:** Thermochemistry

*Learning Objective Met: Lecture #10, #12*

**Experiment 9:** Boyle's Law: Pressure-Volume Relationships in Gases

*Learning Objectives Met: Lecture #11, all Lab LOs*

**Experiment 10:** Calorimetry of Metals

*Learning Objectives Met: Lecture #12, all Lab LOs*

### Exam 4

**Chapter 7:** Quantum Theory and the Electronic Structure of Atoms

*Learning Objective Met: Lecture #3, #5*

**Chapter 8:** Periodic Relationships Among the Elements

*Learning Objective Met: Lecture #4*

**Exam 5****Chapter 9:** Chemical Bonding I: Basic Concepts*Learning Objective Met: Lecture #5***Chapter 10:** Chemical Bonding II: Molecular Geometry and Hybridization of Atomic Orbitals*Learning Objective Met: Lecture #5***Experiment 13:** Models (VSEPR)*Learning Objective Met: Lecture #3, all Lab LOs***Final Exam**

Comprehensive

CLASS SCHEDULE

We will follow this schedule as closely as possible. Any changes will be announced as we go!  
All details/instructions for assignments and Exams are in the syllabus and on Blackboard.

Week 1 August 24 - 30	What's New	Introduction Video Online Assignment Chapter 1 Chapter 2 Exam 1 Practice Problems POSTER #1
	What's Due	Nothing yet - but get ready - Due Dates are coming! Put them on your calendar now!
Week 2 August 31 - September 6	What's New	Experiment 1 - Emails with Team members will be sent out on Monday 8/31/2020 Experiment 2 Experiment 3 Experiment 4 Lab Worksheet 1
	What's Due	Online Assignment (BOTH PARTS) due by TUESDAY September 1 by 11:45PM
Week 3 September 7 - 13	What's New	Nothing new opening this week - be sure to not get behind!! Don't procrastinate!!
	What's Due	Nothing due this week - but work on those Experiments! Don't Wait! Submit them early!
Week 4 September 14 - 20	What's New	Nothing new opening this week - but be ready - Exam 1 is next week!!
	What's Due	ALL of the following are due Tuesday September 15 by 11:45PM: Experiment 1 Experiment 2 Experiment 3 Experiment 4 Lab Worksheet 1
Week 5 September 21 - 27	What's New	EXAM 1 Chapter 3 Chapter 4 Exam 2 Practice Problems
		EXAM 1 - OPENS Monday September 21 at 6:00PM - CLOSES Tuesday September 22 at 6:00PM
Week 6 September 28 - October 4	What's New	Experiment 6 Experiment 5 Lab Worksheet 2 Experiment 8
	What's Due	Nothing due this week but don't put off studying! The next Exam tends to be tough!
Week 7 October 5 - 11	What's New	Nothing new opens this week but you better be studying! Exam 2 is tough!
	What's Due	Nothing due this week but don't wait on those Experiments - they are due next week!
Week 8 October 12 - 18	What's New	Nothing new opens but be ready - Exam 2 is next week!! And don't forget Poster #1!
	What's Due	The following are due by Tuesday October 13 by 11:45PM: Experiment 6 Experiment 5 Lab Worksheet 2 Experiment 8
Week 9 October 19 - 25	What's New	EXAM 2 Chapter 5 Chapter 6 Exam 3 Practice Problems Poster #2
	What's Due	POSTER #1 - due by Monday October 19 by 11:45PM EXAM 2 - OPENS Monday October 19 at 6:00PM - CLOSES Tuesday October 20 at 6:00PM

CLASS SCHEDULE

Week 10 October 26 - November 1	What's New	Experiment 9 Experiment 10
	What's Due	Nothing due this week but watch out! Experiments 9 & 10 are due next week!!
Week 11 November 2 - 8	What's New	Nothing new opens this week but be ready - Exam 3 is next week!
	What's Due	The following are due by Tuesday November 3 by 11:45PM: Experiment 9 Experiment 10
Week 12 November 9 - 15	What's New	EXAM 3 Chapter 7 Chapter 8 Exam 4 Practice Problems
	What's Due	EXAM 3 - OPENS Monday November 9 at 6:00PM - CLOSES Tuesday November 10 at 6:00PM
Week 13 November 16 - 22	What's New	Nothing new opens this week but be ready - Exam 4 is next week!!
	What's Due	Nothing due this week but be ready - the rest of the semester flies by!!
Week 14 November 23 - 29	What's New	EXAM 4 Chapters 9 & 10 Exam 5 Practice Problems Experiment 13
	What's Due	EXAM 4 - OPENS Monday November 23 at 6:00PM - CLOSES Tuesday November 24 at 6:00PM
Week 15 November 30 - December 6	What's New	EXAM 5
	What's Due	Experiment 13 - due by Tuesday December 1 by 11:45PM POSTER #2 - due by Tuesday December 1 by 11:45PM EXAM 5 - OPENS Tuesday December 1 at 6:00PM - CLOSES Wednesday December 2 at 6:00PM
Week 16 December 7	FINAL EXAM	FINAL EXAM OPENS Monday December 7 at 6:00PM - CLOSES Tuesday December 8 at 6:00PM