

**South Plains College**  
**Common Course Syllabus: CHEM 1411**  
**Revised Fall 2023**

**Department:** Science

**Discipline:** Chemistry

**Course Number:** CHEM 1411

**Course Title:** General Chemistry I

**Instructor:** Katheryn Townsend

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Email: ktownsend@southplainscollege.edu

Office Hours: MW 10:45 – 11:45AM

TR 9:30 – 11:30AM

Fridays 9:00 – 11:00AM (check for availability)

ALWAYS by appointment if necessary

**Available Formats:** DUAL CREDIT HYBRID: Lecture is online, Lab is Face-to-Face

**Campuses:** Online and High School Chemistry Lab

**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 a FLEX/HYBRID course. The Lecture portion of this course is completely online but the Lab portion is face-to-face. You are required to attend lab in person at a designated time, face-to-face, to complete Experiments, Lab Assignments and Worksheets. Please also expect to additionally spend AT LEAST 8 – 10 hours per week watching videos, reading notes, working on Worksheets and/or Practice Problems, completing assignments, and exams weekly. Some students may require more hours per week to be successful in the class. You must be very self-disciplined to complete a partially online course. All assignments, worksheets, and exams etc. must be completed and submitted by their specific deadlines.

**Textbook:** NO TEXTBOOK REQUIRED

**Supplies:**

- **To purchase (these may be provided by your High School – please check before purchasing):**
  - **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. TI-30XA is NOT recommended.
- **Goggles or Safety Glasses for lab**
- **May need extra materials to prepare 2 posters**
- **Camera or Scanner and a way to upload pictures to Blackboard** – cell phone cameras are perfect! You just need a way to take a picture of your experiment's Data Tables, save as PDFs and be able to submit it on Blackboard! CamScanner and Scannable are a couple of great apps that help with this!!
- **Obtained from Blackboard:**
  - **Lab Manual – REQUIRED, CHEM 1411 Lab Manual**
  - **Power Point Notes, Outlines and Videos - REQUIRED**
    - On Blackboard, each Chapter will have a folder. In that folder 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**
    - Experiments will be performed in the lab room during a designated time. Students will then complete the Experiment Lab Worksheet (provided by instructor) in the Lab Manual and turn it in to the instructor 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.
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 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 portion 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 experiments and exercises **in the lab**, which are designed to reinforce the lecture material and give you hands-on experience of a chemical nature. Attending and performing these experiments in the **lab face-to-face is a REQUIRED** part of this class. Missing lab can drastically reduce the opportunity for learning and may adversely affect a student's achievement. Each lab will have a data analysis and question section in the lab manual which must be completed. The instructor will provide a Lab Worksheet to each lab group for them to complete and turn in for their lab grade. These Lab Worksheets will be submitted on Blackboard, PDF is the preferred format so that feedback can be given. Labs count 30% of your overall class average so they are a significant part of your grade. At the end of the semester the Instructor will automatically drop the lowest lab grade for the student. If a lab is missed the student is still responsible for collecting any material that was given during the Experiment in order to prepare for questions on the Exam that come from the Experiments. **A student will NOT be able to enter the lab without the proper attire (closed toed shoes, long pants, shirts with sleeves, long hair pulled back, and safety goggles). A student that is not dressed appropriately for lab will not be able to perform the experiment and therefore will receive a 0 for that Lab.**

- **Lab Absence/Make-Ups:** If a lab is missed, arrangements can be made with the high school lab facilitator to make up the lab. The make-up must be completed in time for the student to be able to submit their Lab Worksheet on Blackboard before the Lab's deadline. If the absence is due to hospitalization or Dr's orders additional time may be given but proper documentation must be received by the instructor. Proper documentation must be received by the high school lab facilitator and the instructor within **one week** of the missed lab **and it must be before the lab's original deadline**. After the extended deadline, labs can no longer be made up and will be zeros. Documentation includes but is not limited to: a Dr's note with dates indicating length of absence, hospitalization check-in and/or check-out paper with dates of stay, an email from SPC's school nurse (DeEtte Edens), or an email/note from the high school's lab facilitator, nurse, counselor, or principal. When documentation is received the instructor and high school lab facilitator will clarify the final due date for the lab make-up.

**Online Assignment:** This a **two** part assignment due close to the beginning of the semester and will count as a lab grade. The instructions are 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 folder using the Blackboard Assignment 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 Blackboard. **THERE ARE NO LATE ASSIGNMENTS ACCEPTED and NO MAKEUPS ALLOWED!!** **\*\*The only exception will be if the student has been hospitalized. In that situation documentation with check-in/check-out dates from the hospital will be required.** **If you are hospitalized please contact the instructor: Kathryn 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 folder on Blackboard where you will find information about these Posters and a 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 folder.
- **NO Late Posters will be accepted!! As always, there is NO LATE WORK ACCEPTED and NO MAKEUPS ALLOWED! \*\*The only exception will be if the student has been hospitalized. In that situation documentation with check-in/check-out dates from the hospital will be required. If you are hospitalized 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:

- **Major Exams:** There will be five major exams and they will be taken online on Blackboard. 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 MAKEUPS! As always, there is NO LATE WORK ACCEPTED and NO MAKEUPS ALLOWED! \*\*The only exception will be if the student has been hospitalized. In that situation documentation with check-in/check-out dates from the hospital will be required. If you are hospitalized 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 online on Blackboard.
- Exams are 33 – 50 questions each.
- The Exams will have a one week window of availability but are locked with a password. The password will be given to the high school lab facilitator. 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!! This picture should include the ENTIRE computer screen with time shown.** 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 fully comprehensive, has 50 multiple choice questions and is worth 100 points. The final must be taken during the scheduled South Plains College final exams week and by the scheduled day on the syllabus. The Final Exam is online on Blackboard. **NO** make up is available for the final since it is scheduled at the very end of the term. **A missed exam will receive a score of zero. There will be NO MAKEUPS! As always, there is NO LATE WORK ACCEPTED and NO MAKEUPS ALLOWED! \*\*The only exception will be if the student has been**

**hospitalized. In that situation documentation with check-in/check-out dates from the hospital will be required. If you are hospitalized please contact the instructor: Katheryn Townsend at [ktownsend@southplainscollege.edu](mailto:ktownsend@southplainscollege.edu), the nurse: 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.\*\***

- **DROPPING AN EXAM** – At the end of the semester the instructor will drop the (one) lowest Exam grade. If a student reaches the end of the semester (after Exam 5) and is happy with their average they may choose to not take the Final Exam in which it will be graded as a zero (0) but then it would be dropped and no longer affect their average.
- **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 Exams they will receive a 0 for that Exam and that 0 will NOT BE DROPPED!
- 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!!** This picture should include the ENTIRE computer screen with time shown. 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 Lubbock 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). **Please DO NOT use Blackboard messages – they tend to get lost!! Please use SPC Email only!** I will respond to your message within 48 hours if I receive your e-mail between 8:00 AM Monday and 3:45PM Thursday (excluding holidays and school breaks). E-mails received during the time period lasting from 3:45PM Thursday to 8:00 AM Monday of the following week will receive a response within 48 hours of that Monday (excluding holidays and school breaks). Emails received during holidays or school breaks will receive a response within 48 hours from when SPC resumes normal school hours.

**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:** Students are expected to login frequently in order to be successful in this course. Students who enroll in a course but have “Never Attended” by not logging into this course on Blackboard or by not attending the face-to-face labs by the official census date, as reported by the instructor, will be administratively dropped by the Office of Admissions and Records. Once we are past the official census date I do not drop students for non-attendance/activity. It is the student’s responsibility to initiate the drop process if you decide to not complete the course. All missing work will receive zeros in the gradebook. If a student does not drop the course then the grade that the student has at the end of the semester is what will be submitted to Texan Connect. This may be an ‘F’ depending on grades/missing work/zeros, etc. Regular, consistent participation is required for this course. Any activity missed, regardless of cause, reduces the opportunity for learning and may adversely affect a student’s achievement.

**Tutor:** Tutoring (both face to face and online) might be available during the semester. Please check the South Plains College Tutoring website for more information.

**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 (see the full definition of cheating in this syllabus and in the SPC catalog under Academic Integrity) on any of the Exams they will receive a 0 for that Exam and that 0 will NOT BE DROPPED!

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.

**Course Syllabi Statements are located at:** <https://www.southplainscollege.edu/syllabusstatements/>



## 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 0:** Introduction to Lab Equipment

*Learning Objectives Met: all Lab LOs*

**Experiment 1:** Measurements

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

**Experiment 2:** Density

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

**Experiment 13:** Determining Chemical Formulas and Names

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

**Experiment 3:** 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 4:** Determining the Mole Ratios in a Chemical Reaction

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

**Experiment 5:** Hydrates

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

**Experiment 14:** Precipitation Reactions

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

**Experiment 6:** 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 7:** Boyle's Law: Pressure-Volume Relationships in Gases

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

**Experiment 8:** Pressure-Temperature Relationship in Gases

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

**Experiment 9:** Calorimetry of Metals

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

**Experiment 10:** Endothermic and Exothermic Reactions

*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***Experiment 11B:** Atomic Emission Spectroscopy*Learning Objectives Met: all Lab LOs***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 16:** Models (VSEPR)*Learning Objective Met: Lecture #3, all Lab LOs***Final Exam**

Comprehensive

**CHEM 1411 DUAL CREDIT 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.**

<b>WEEK:</b>	<b>IN PERSON LAB</b>	<b>RECOMMENDED LECTURE PACE</b>	<b>WHAT'S DUE THIS WEEK:</b>
<b>WEEK 1:</b> August 28 - September 3	<b>Experiment 0</b> <b>Experiment 1</b>	Begin Chapter 1 notes and worksheet Begin Exam 1 Practice Problems	Nothing due yet - but get ready! Due Dates are coming! Put them in your calendar!
<b>WEEK 2:</b> September 4 - 10	<b>Experiment 2</b>	Finish Chapter 1 notes and worksheet Continue Exam 1 Practice Problems	<b>ONLINE ASSIGNMENT (BOTH PARTS) - due by TUESDAY September 5th by 11:00AM</b>
<b>WEEK 3:</b> September 11 - 17	<b>Experiment 3</b>	Begin Chapter 2 notes and worksheet Continue Exam 1 Practice Problems	Nothing due this week! But make sure you are completing and submitting Lab Worksheets! Lab Worksheets are due NEXT WEEK!
<b>WEEK 4:</b> September 18 - 24	<b>Experiment 13</b>	Finish Chapter 2 notes and worksheet Finish Exam 1 Practice Problems	The following Lab Worksheets are due by FRIDAY September 22nd by 11:00AM: <b>Experiment 0</b> <b>Experiment 1</b> <b>Experiment 2</b> <b>Experiment 3</b> <b>Experiment 13</b>
<b>WEEK 5:</b> September 25 - October 1	<b>Review</b> <b>Take Exam 1</b>	Review Chapters 1 & 2 TAKE EXAM 1 Begin Chapter 3 notes and worksheet	<b>EXAM 1 - OPENS MONDAY September 25th at 8:00AM and CLOSSES FRIDAY September 29th at 11:00AM</b>
<b>WEEK 6:</b> October 2 - 8	<b>Experiment 5</b>	Finish Chapter 3 notes and worksheet Begin Exam 2 Practice Problems	Nothing due this week! But don't put off studying!! The next Exam tends to be tough!!
<b>WEEK 7:</b> October 9 - 15	<b>Experiment 4</b> <b>Experiment 14</b>	Begin Chapter 4 notes and worksheet Continue Exam 2 Practice Problems	Nothing due this week! But be sure to be submitting those Lab Worksheets! They are due NEXT WEEK! Don't wait until the last minute!
<b>WEEK 8:</b> October 16 - 22	<b>Experiment 6</b> <b>Poster Work time</b>	Finish Chapter 4 notes and worksheet Finish Exam 2 Practice Problems Create and Submit Poster #1	The following Lab Worksheets are due by FRIDAY October 20th by 11:00AM: <b>Experiment 4</b> <b>Experiment 5</b> <b>Experiment 14</b> <b>Experiment 6</b>
<b>WEEK 9:</b> October 23 - 29	<b>Review</b> <b>Submit Poster #1</b> <b>Take Exam 2</b>	Review Chapters 1-4 SUBMIT Poster #1 TAKE EXAM 2 Begin Chapter 5 notes and worksheet	<b>Poster #1 - due by TUESDAY October 24th by 11:00AM</b> <b>EXAM 2 - OPENS MONDAY October 23rd at 8:00AM and CLOSSES FRIDAY October 27th at 11:00AM</b>
<b>WEEK 10:</b> October 30 - November 5	<b>Experiment 7</b> <b>Experiment 8</b>	Finish Chapter 5 notes and worksheet Begin Chapter 6 notes and worksheet Begin Exam 3 Practice Problems	Nothing due this week but watch out!! Lab Worksheets are due NEXT WEEK!!
<b>WEEK 11:</b> November 6 - 12	<b>Experiment 9</b> <b>Experiment 10</b>	Finish Chapter 6 notes and worksheet Finish Exam 3 Practice Problems	The following Lab Worksheets are due by FRIDAY November 10th by 11:00AM: <b>Experiment 7</b> <b>Experiment 8</b> <b>Experiment 9</b> <b>Experiment 10</b>

<b>WEEK 12:</b> November 13 - 19	Review Take Exam 3	Review Chapters 1 - 6 TAKE EXAM 3 Begin Chapter 7 notes and worksheet Begin Exam 4 Practice Problems	<b>EXAM 3</b> - OPENS MONDAY November 13th at 8:00AM and CLOSES FRIDAY November 17th at 11:00AM
<b>WEEK 13:</b> November 20 - 26	Experiment 11B	Finish Chapter 7 notes and worksheet Cover all of Chapter 8 notes and worksheet Finish Exam 4 Practice Problems	**Due to the Thanksgiving break, this week's Lab Worksheet will be due next week!**
<b>WEEK 14:</b> November 27 - December 3	Review Take Exam 4 Poster Work time	Review Chapters 1 - 8 TAKE EXAM 4 Begin Chapter 9 notes and worksheet Begin Exam 5 Practice Problems Create and Submit Poster #2	The following Lab Worksheet is due by FRIDAY December 1st by 11:00AM: <b>Experiment 11B</b>  <b>EXAM 4</b> - OPENS MONDAY November 27th at 8:00AM and CLOSES FRIDAY December 1st at 11:00AM
<b>WEEK 15:</b> December 4 - 10	Experiment 16 Review Take Exam 5 Submit Poster #2	Finish Chapter 9 notes and worksheet Cover all of Chapter 10 notes and worksheet Finish Exam 5 Practice Problems SUBMIT Poster #2 TAKE EXAM 5	The following is due by FRIDAY December 8th by 11:00AM: <b>Experiment 16</b> <b>Poster #2</b>  <b>EXAM 5</b> - OPENS MONDAY December 4th at 8:00AM and CLOSES FRIDAY December 8th at 11:00AM
<b>WEEK 16:</b> December 11	FINAL EXAM	TAKE FINAL EXAM	<b>FINAL EXAM</b> - OPENS MONDAY December 11th at 8:00AM and CLOSES WEDNESDAY December 13th at 11:00AM