

**South Plains College
Common Course Syllabus: CHEM 1406
Revised August 2026**

Department: Science

Discipline: Chemistry

Course Number: CHEM 1406

Course Title: Introduction to Chemistry I

Instructor:

Dr. Laci Alexander

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Office Hours: Monday: 8:30 am – 9:30 am

Tuesday: 8:30 am – 9:30 am; 1:30 pm – 2:30 pm

Wednesday: 8:30 am – 9:30 am

Thursday: 8:30 am – 9:30 am; 1:30 pm – 2:30 pm

Friday: 9 am – 11 am

You may also make an appointment for office hours using the following link:

[Calendly Office Hours](#)

Available Formats: internet, face-to-face, dual credit

Campuses: Levelland

Course Description: Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors. Basic laboratory experiments supporting theoretical principles presented in lecture; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports. This course may not be substituted for CHEM 1411.

Prerequisite: Can NOT be substituted for CHEM 1411. Recommended course for students preparing for education, nursing and other allied health fields (NOT pre-professional fields).

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

Materials:

No additional materials are required for this course

Supplies:

Calculator – Required, must be scientific, **CELL PHONES NOT ALLOWED**

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:**

1. Convert units of measure and demonstrate dimensional analysis skills
2. Define the fundamental properties of matter and classify matter, compounds, and chemical reactions.
3. Determine the basic nuclear and electronic structure of atoms.
4. Distinguish between ionic and covalent compounds and name the different compounds.
5. Identify trends in chemical and physical properties of the elements using the periodic table.
6. Determine the role of energy in physical and chemical reactions.
7. Use the mole concept to determine the number of atoms, moles, grams, and solve elementary stoichiometry-based calculations.
8. Determine the concentrations of solutions using percentage and molarity designations.
9. Use various characteristics of a solution to identify it as an acid or base.
10. Identify and name various organic compounds.
11. Identify and explain the functions of carbohydrates, lipids, and proteins.

From Lab:

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: 2-3 questions from each semester will be randomly selected from the regular exams. These will pertain to a pre-selected topic and will be used to determine the extent of improvement that the students have gained during the semester.

Course Evaluation:

- **Minimum Computer Requirements:**
 - 1. Person computer with Pentium processor with at least 32 MB of memory, a minimum 2 GB hard drive, running Windows 95 or later (Windows XP or better is preferred) or an updated Mac IOS.
 - 2. Web Browser: Google Chrome is most compatible with MasteringChemistry, however firefox or safari will work. Please do not use Internet Explorer.
 - 3. A high speed internet connection
 - 4. Microsoft Office and Microsoft PowerPoint and Word software (a recent version, preferably 2003 or higher).
 - 5. Windows Media Player (the latest version) or other updated Media Player
 - 6. Soundcard and/or 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 web browser and find them on your computer once they are downloaded.
 - 9. Knowledge of basic operations of Microsoft Word, PowerPoint, and Excel.
 - 10. Knowledge of how to view and adjust videos within a Media Player.
 - 11. Webcam: all exams will be remotely proctored
- **Course Specific Instructions**
 - This course is completely online. Please expect to spend approximately 4-6 hrs per week reading, watching videos, completing assignments, and exams weekly. You must be very self-disciplined to complete an online course. All assignments, pre-lab quizzes, and exams etc. must be completed and submitted by the deadlines provided!!
- **Blackboard**
 - The lecture portion of this course is completely online and is conducted through Blackboard. Blackboard may be accessed at <http://southplainscollege.edu.blackboard.com>. 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 IS department or at blackboard@southplainscollege.edu or 806.716.2180. Only contact them if you need assistance with login or a browser related question. DO NOT contact them if your computer crashes, your internet fails, you have instructional questions for your instructor, etc. Please include your full name, course registered for with instructor and section noted, and the preferred way for them to contact you.
- **Eight Major Exams**
 - NO MAKEUPS
 - All Multiple Choice questions
 - Each Exam is worth 100 points
 - Cheating

- 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 average. In the case of cheating, the Final Exam will **NOT** replace the lowest Exam score (the 0 stands and cannot be replaced)
- **Comprehensive Final Exam**
 - The final is REQUIRED
 - 50 Multiple Choice questions, 100points with the possibility of bonus points
- **Grading of Exams**
 - The lowest exam grade will be dropped. This can be the final. However, a zero on the final WILL NOT be dropped. A zero on exam 1-5 will be dropped after the final exam.
- **Open note tests**
 - A 3X5 notecard will be permitted for Exams 1-5 Both sides of the notecard may be used and maybe handwritten or typed. Notecards should contain formulas, definitions, and constants, or any other information allowed by the instructor announced in class. Notecards CAN NOT contain any worked examples from class notes, in-class worksheets, practice problems, or any other examples found online. A student should also not write any questions on the notecard.
 - For each unauthorized example found on the notecard points will be deducted from the exam. The length of the exam and the amount of unpermitted information will determine the number of points deducted. Any bonus points for that exam will also be deducted from the exam total. Any unauthorized material on the notecard is classified as cheating therefore the cheating policies in the syllabus will also be followed.
- **Experiments**
 - Experiments will be done in your high school lab and worksheets/ assignments will be submitted via blackboard.
 - Experiments
 - A missed Lab results in a 0.
 - Make-Ups for missed Lab Experiments are **NOT** allowed.
 - The due date is FIRM. I will NOT accept any late work at all!
- **Chapter Homework**
 - Each chapter will have a homework assignment on Blackboard. These will be submitted via blackboard
- **Dropped Grades**
 - Lowest two Grades Dropped
 - At the end of the semester the Instructor will automatically drop the lowest two grades from the total of the lab and homework. The lowest TWO grades will be dropped.

- **Late policy**
 - **NO LATE WORK WILL BE ACCEPTED.** This is a definite policy and will not be changed. It is imperative that you stay up on your assignments and labs. This will be a fast paced course and will require a lot of time. You CANNOT shove a weeks worth of material into a few hours. I will not accept ANYTHING late! No excuses, no exceptions. This includes labs, homework, and TESTS. I can see when you log into things, how long you took, and when you are finished. Please stay on top of your work!
- **Grading:**
 - Exams 50% (lowest grade dropped)
 - Chapter Homework 20% (lowest grade dropped)
 - Discussion/Journal Entries 10%
 - Attendance 5%
 - Labs 15% (lowest grade dropped)
- **Attendance**
 - It is vitally important that you access this course AT LEAST 1 times a week. If you are unable to finish this course, complete a withdrawal slip at the registrar's office. **Students will be dropped from the course with an 'F' if they have failed to login and participate in the online course for 7 or more consecutive days**
- **Academic Integrity**
 - Cheating (as defined in the SPC General Catalog) will not be tolerated. If a student is caught cheating a grade of zero will be given and the instructor has the right to drop the student from the course
- **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.
- **Email: WHEN YOU HAVE QUESTIONS, PROBLEMS, OR COMMENTS, you can email through Blackboard messages, or at laalexander@southplainscollege.edu, or through the remind app.**
 - I will respond to your message within 48 hours if I receive your email between 8:00 AM Monday and 3:30 PM Thursday (excluding holidays). Emails received during the time period lasting from 3:30 PM Thursday to 8:00 AM Monday of the following week will receive a response within 48 hours of that Monday.
 - **Expectations when Corresponding:** Please be polite, courteous, and respectful when using Blackboard message, email, discussion forums, and remind app. 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 as for their classmates. Therefore, if, in the view of the instructor, a student is disrupting the class the appropriate disciplinary action will be taken.

- **Computer Problems or Blackboard 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. While the computer and/or internet connection is being repaired, the student should seek an alternate computer. 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. It is the responsibility of the student to have a backup plan in place. If the blackboard 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 your 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 or videos). 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 needed. Any material downloaded may not be altered or modified in any way. The downloaded material may not be distributed in any way.

Plagiarism and Cheating: Students are expected to do their own work on all projects, quizzes, assignments, examinations, and papers. 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 the Final Exam will **NOT** replace the lowest Exam score (the 0 stands and cannot be replaced)

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.

Responsible Use of Artificial Intelligence (AI)

Artificial intelligence (AI) tools such as ChatGPT, Copilot, Gemini, and similar technologies can be valuable study and learning tools when used responsibly. I encourage you to explore AI as a way to strengthen your understanding of chemistry. For example, you may use AI to:

- Ask for additional explanations of difficult concepts.
- Generate practice problems or study questions.
- Quiz yourself before an exam.
- Ask for help identifying gaps in your understanding.
- Explore different ways of approaching or thinking about a chemistry concept.
- Create study guides, flashcards, or review activities for your personal study.

However, AI may not be used to complete any assignment that is submitted for a grade unless I specifically state otherwise. This includes homework, lab assignments and reports, discussion posts, written responses, reflections, calculations, and other graded work.

Written work is especially important. Anything submitted in your name should reflect your own thinking, understanding, and voice—not text generated or rewritten by AI. Do not use AI to write an assignment and then edit or reword the response to make it appear to be your own. The purpose of written assignments is for you to process the material, make connections, and demonstrate what *you* understand.

A good rule to remember is:

Use AI to help you learn—not to do your learning for you.

If you use AI while studying, you are still responsible for verifying the information it provides. AI can confidently provide incorrect information, calculations, explanations, or references. Always compare information with your course materials, textbook, notes, and other reliable sources. If you are unsure whether a particular use of AI is appropriate, ask me before using it. I would much rather help you find a responsible way to use AI as a learning tool than have AI interfere with your opportunity to develop the skills this course is designed to teach.

Instructional Policies & College Resources

- For information regarding official South Plains College statements — including policies on intellectual exchange, disabilities, non-discrimination, Title IX pregnancy accommodations, CARE Team, and campus concealed carry — please visit:
- [SPC Syllabus Statements](#)

Week: Date	Chapters	Labs
Week 1	Introduction	Lab Safety
Week 2	Chapter 1: Introduction to Chemistry: Measurements, Atoms, Molecules and More	Experiment 1: Measurements Experiment 2: Density
Week 3	Chapter 2: Atoms, Molecules and Ions	Experiment 3: Elements and Compounds
Week 4	Chapter 1 Exam Chapter 2 Exam	
Week 5	Chapter 3: Mass Relationships and Stoichiometry	Experiment 4: Determining the Mole Ratios in a Chemical Reaction Experiment 13: Determining Chemical Formulas and Names
Week 6	Chapter 4: Solutions	Experiment 5: Hydrates Experiment 6: Determination of Molar Mass by Titration
Week 7	Chapter 3 Exam Chapter 4 Exam	
Week 8	Chapter 5: Acid/ Base Chemistry	Experiment 7: Boyle's Law Experiment 8: Pressure- Temperature Relationship in Gases
Week 9	Chapter 6: Gas Laws	Experiment 11A: Atomic Emission Spectroscopy
Week 10	Chapter 5 Exam Chapter 6 Exam	
Week 11	Chapter 7: Energy	Experiment 12: Household Acids and Bases and Titration
Week 12	Chapter 8: Introduction to Organic Chemistry	
Week 13	Chapter 7 Exam Chapter 8 Exam	
Week 14	Chapter 9, Chapter 10, & Chapter 11: Biochemistry Overview	Experiment 15: Organic Models
Week 15	Chapter 9 Exam Chapter 10-11 Exam	
Week 16	Comprehensive Final Exam	

