

South Plains College
Common Course Syllabus: CHEM 1411
Revised August 2020

Department: Science

Discipline: Chemistry

Course Number: CHEM 1411

Course Title: General Chemistry I

Instructor:

Dr. Laci Alexander

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Office Hours: MW: 8 – 9:30 AM; TR: 2:30 – 3:30 PM

F: 9:00 AM – 12:00 PM

Office hours can also be made by appointment.

Available Formats: conventional, 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 lecture; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports.

Prerequisite: MATH 1314 (College Algebra) or equivalent academic preparation; high school chemistry is strongly recommended.

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

Materials included in all inclusive access (on blackboard):

Textbook – Recommended, Chemistry by Chang 13th edition

Lab Manual – Required, CHEM 1411,

Connect Access Code

Supplies needed:

Safety Goggles – Required, obtained from bookstore

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

Scantrons – Required, will need 5 or 6 total

This course partially satisfies a Core Curriculum Requirement:

Life and Physical Sciences Foundational Component Area (030)

Core Objectives Addressed:

- **Communication 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 skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork skills** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Course Purpose: The purpose of the life and physical science component in the core curriculum is to enable the student to understand and apply relationships and theories of the natural sciences. Mastering general chemistry will enable the student to use the fundamentals to analyze, classify, and predict events based on chemical and physical properties.

Course Requirements:

1. The student should do each of the following:
 - a. Read the assigned chapters in the textbook and laboratory manual.
 - b. Attend all lectures and laboratory classes.
 - c. Take notes in class.
 - d. Participate in class discussions.
 - e. Complete assigned outside reading material and homework.
 - f. View audiovisual materials on selected topics.
 - g. Use the computer software in the lab and/ or classroom as it is assigned.
 - h. Complete the exams on the assigned dates; the exams may include essay questions.
2. For laboratory the student should:
 - a. Complete the prelab assignment before going into lab.
 - b. Read and Comprehend each experiment assigned in the laboratory manual.
 - c. Successfully complete each experiment.
 - d. Learn to use and/or analyze data from instruments or equipment needed to complete the experiments. (e.g. balance, pH meters, volumetric glassware)
 - e. Complete the laboratory reports, including post lab calculations and discussion questions.

Student Learning Outcomes: Upon completion of the course, the student will show competence in the course objectives listed below:

From Lecture:

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:

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.

• **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
- **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.

Course Evaluation:

- **Five Major Exams**
 - SCANTRON is required, available at the bookstore, Apperson Form 29240
 - NO MAKEUPS
 - All Multiple Choice questions
 - Each Exam is worth 100 points with the possibility of bonus points
 - Calculators will have their memory cleared and proof of memory clearing must be shown to the instructor before the Exam can be started
- **Comprehensive Final Exam**
 - The final is REQUIRED. Will be open note
 - 50 Multiple Choice questions, 100points with the possibility of bonus points
 - Scantron is required, available at the bookstore
- **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.
- **Notecards**
 - 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.

- **Lab Worksheets, 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 Worksheet.**
 - Lab Worksheet
 - Each Lab Worksheet must be filled out during the Experiment and turned in before the student leaves the lab
 - Each lab group will turn in 1 Lab Worksheet with all group members name on it, all members will receive the same grade
 - Each Lab Worksheet is worth 100 points.
 - Experiments
 - Lab Worksheet is what makes up the student's grade for that Experiment.
 - A missed Lab results in a **0** for the Lab Worksheet.
 - Make-Ups for missed Lab Experiments are **NOT** allowed.
- **Chapter Homework**
 - Each chapter will have a homework section on Connect. These will be turned in one to two class days after the chapter material has been finished. The date will be announced on the syllabus and on Connect.
- **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.
- **Cell Phone and Laptop Computer Policy**
 - Cell Phones and Laptops may be taken up and kept during lecture and lab if they are a distraction to the student, the instructor or the class
 - The only exception will be due to Special Services recommendations and those will be handled on an individual student to student basis
- **Grading:**
 - Exams are 70%
 - Homework and Labs combined are 30%
- **Attendance Policy:**
 - 4 absences max and I drop you with an 'F'
 - Last Day to Drop is November 19th

Class attendance is very important. Make every effort to be present. If you must miss a class or must leave early, please let me know about it **BEFORE** class begins or an unexcused absence will be given. You must attend the **FULL** time of class in order to be considered present. You will be counted absent if you leave during the scheduled class time.

If you are unable to complete this course, you must initiate a withdrawal (W) through the Registrar's Office before **November 19th**. If you simply stop attending class without withdrawing, 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 2019-2020 SPC General Catalog.

You are a candidate for an excess absence drop (**F**) if you miss 4 class days **total**, without clearing your absences with me. Two excused absences equal one unexcused absence and will count towards the 4 excess absences.

Tardy: If you show up AFTER the attendance sheet has been passed around you WILL NOT be allowed to sign the attendance sheet, therefore will be counted absent. The attendance sheet will be passed around sometime after 30 mins into the class. *It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.*

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.

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.

SPC Bookstore Price Match Guarantee Policy:

If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

COURSE CHANGES OR INFORMATION DUE TO COVID-19

During this time of pandemic there have been many changes in our academic world. This section will provide as much information as I can about this course and how we will operate while we are able. Please be advised that somethings can change quickly. In the event that we are forced to go fully online I will release that information when it happens. For now the course will operate as explained below.

- **Flex course**
 - This course is a 'Flex-course' this means that approximately 50% of the class will be conducted online and 50% of the class will be conducted on campus in a safe social distanced manner. The way this will work for my class is ALL lecture material will be handled online. I will post pre-recorded videos for each chapter and you should watch these BEFORE COMING TO CLASS THAT WEEK. During the

time you are in class we will do labs and cover any questions you may have as time allows.

- In order to social distance you will not be coming to class both days this course is scheduled. For example, for a Monday/Wednesday course from 9:30am – 12:15 pm you will only be required to be here on Monday or Wednesday. I will prefer for you to pick one day or the other and stick with that day for the remainder of the semester. You will sign up for Monday or Wednesday (Or Tuesday or Thursday if that is when your course is) via an online sign up tool which will be posted on blackboard in the announcement section.
- **Health Screenings and Safe Measures**
 - To ensure the safety of everybody in attendance to class there will be some safety measures that will need to be in place.
 - COVID Screening: You will be screened each day for class, this could include a short questionnaire before class. If you exhibit any symptoms of COVID you will be sent home for the safety of everybody around you.
 - Masks: each student will be required to wear a mask inside any building. Every person is required to wear a mask in the hallways. The professor may take their facial covering off IF no student is within 6 ft to help with audible understanding. For this reason, I will try to keep my distance so you can understand me more clearly during instruction.
 - Seating Arrangements: to ensure the least number of students come in contact throughout the day SPC is issuing a seating arrangement pattern in each class. You will find SPC stickers in the classroom next to a seat. There is a schedule posted outside each classroom explaining where you should sit. If your class period starts during a time which says to sit where the sticker is please be sure to sit at a stickered seat, if it does not please sit in a seat without the marker.
- **Attendance**
 - Attendance will not be taken as apart of this course due to COVID-19. If you must be absent for any reason please contact me via email ASAP. This should be done within 24-48 hours of the missed class to be able to make up any material. Course material will be available to you in digital format for any missed class. I will explain more of how this will work on the first day of class and as it becomes needed.
 - Please do not take this as an excuse to NOT COME to class. If you are well PLEASE BE IN CLASS. This will not only benefit you but will be the best way for you to be successful in this course.
 - If you have came into direct contact with someone who has tested positive for COVID or if you have been tested for COVID please stay at home while you are waiting on your results. Please email me in a timely matter to ensure that you will not fall behind in the course.