South Plains College
Common Course Syllabus: CHEM 1411
Revised 08/17/2021

Department: Science

Discipline: Chemistry

Course Number: CHEM 1411

Course section: 451

Course Title: General Chemistry I

Available Formats: Dual-Credit, Lecture online and Lab at local high school.

Campuses: Online/Local high school

Instructor: Dr. Bangshing Wang. Office S117B. **Email:** bwang@southplainscollege.edu

Office Hours:

	Monday and Wednesday:	8:30 am ~ 11:00 am
	Tuesday and Thursday:	8:30 am ~ 9:30 am
	Friday:	8:30 am ~ 9:30 am

Course Description: CHEM1411: General Chemistry I. (4:3:3) Pre-requisite: MATH 1314 (College Algebra) or equivalent academic preparation; high school chemistry is strongly recommended. 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

Textbook: N/A

Supplies: Required

- CHEM1411 Lab Manual available on BlackBoard.

- Personal computer with internet access.
- Any device to take pictures of labs and worksheets (High school teacher will collect, scan, and email them for grading).
- Scientific calculator. Usage of cell phones *WILL NOT BE* allowed on exam!

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. 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:
Few topics/questions from the exams will be selected to assess the students' learning outcomes at the end of semester.

Course Evaluation/Grading Policy:
CHAPTER EXAMS: There will be *TEN*-chapter exams and they will be taken on *Blackboard*; *Chapter 1 ~ 9 exams will be open from 7:00 AM Monday to 4:00 PM Friday during the week of exam. Chapter 10 exam will be open from 7:00 AM Monday to 4:00 PM Wednesday of the last week*. It is 1-hour timed exam, once student start, must complete the exam. These exams will cover the materials in the lecture notes, and the schedule of the exams are on the course schedule. Exams will be in a multiple-choice format; each exam will be worth 50 points. Only the materials discussed in the lecture notes will be on the exam and you will have designated time to finish the exam. *There will be no make-ups for missed exams.*

- Chapter 1 exam: 50 points
- Chapter 2 exam: 50 points
- Chapter 3 exam: 50 points
- Chapter 4 exam: 50 points
- Chapter 5 exam: 50 points
- Chapter 6 exam: 50 points
- Chapter 7 exam: 50 points
- Chapter 8 exam: 50 points
- Chapter 9 exam: 50 points
- Chapter 10 exam: 50 points

One lowest chapter exam grade will be dropped and 9 highest chapter exam grade will be used for calculating the final grade. Worth total of 450.

The materials scheduled for each lecture exam by subject to change, this change will be announced in advance if necessary.

EXAM REVIEW: There will be *TEN* exam reviews, sole purpose of exam practice review is to help prepare for the exam and it does not count towards the total grade. Highly recommend students spend quality time with the exam review as it will prepare you for the exam. You can find the exam reviews on BlackBoard.

LAB EXPERIMENTS: Lab reports/practices will be collected for grading by the high school teacher after the experiment/practice has been done. High school teacher will collect,

scan, and email the materials for grading. Each lab assignment will be worth 10 points. The laboratory portion of this class will be comprised of topic discussion, practice worksheets and lab experiments. The lab portion of this course will consist of group work to perform lab experiments. There will be no make-up labs for the missed lab; students will receive ZERO for the lab section if missed.

- Lab experiment 1: 10 points
- Lab experiment 2: 10 points
- Lab experiment 3: 10 points
- Lab experiment 4: 10 points
- Lab experiment 5: 10 points
- Lab experiment 6: 10 points
- Lab experiment 7: 10 points
- Lab experiment 8: 10 points
- Lab experiment 9: 10 points
- Lab experiment 10: 10 points
- Lab experiment 11B: 10 points
- Lab experiment 13: 10 points
- Lab experiment 14: 10 points

One lowest Lab grade will be dropped, total lab grades will be worth a total of 120 points

QUIZZES: Quizzes will be taken on Blackboard. *All the quizzes will be open from 7:00 AM Monday to 4:00 PM Thursday during the week that is assigned.* It will be multiple choice questions. Each quiz will worth 10 points. These quizzes will cover the materials in the lecture notes, and the schedule of the quizzes are on the course schedule.

- Quiz 1: 10 points
- Quiz 2: 10 points
- Quiz 3: 10 points
- Quiz 4: 10 points
- Quiz 5: 10 points
- Quiz 6: 10 points
- Quiz 7: 10 points
- Quiz 8: 10 points

One lowest quiz grade will be dropped, total quiz grade will be worth 70 points.

COURSE GRADING:

Grading based on percentage:	*The grade distribution:*	
A = 90 – 100%	Total Chapter Exams:	450 points
B = 80 – 89%	Total Home Labs:	120 points
C = 70 – 79%	Total Lab Worksheets:	70 points
D = 60 – 69%		
F = below 60%	**Total Possible point:**	**640 points**

Attendance Policy:

It is vitally important that you plan your time and study lecture notes and complete all the lab assignments to do well in this course.

Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus. When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first-class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

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 a grade of ZERO for the assignment and can result in an F for the course if circumstances warrant.

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.

COVID-19
If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or get tested for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376

Email: When you have questions, problems, or comments, you can e-mail me directly to *bwang@southplainscollege.edu*. Please refrain from using the BlackBoard Course Messages tool to message me. I will respond to your email in a timely manner (within 24 hours), emails received after 10:00 PM on Monday through Thursday will receive a response next morning. Emails received on Friday through Sunday will get a response usually same day email received, unless email was sent after 10:00 PM. I generally will not check my email often during the weekend, but I will reply to your email in a timely manner when I see them.

Expectations when Corresponding: Please be polite, courteous, and respectful when communicating. Do not use profanity under any circumstances. Do not write disrespectful, insulting, mean, rude, profane, insensitive, or other hurtful messages or comments under any circumstances. Failure to abide by this policy will result in the appropriate disciplinary actions.

Online Disclaimer: This is to notify you that materials you may be accessing in chat rooms, e-mails, discussion forums or unofficial web pages are not officially sponsored by the instructor or 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.

Minimum Computer Requirements:

1. Personal computer
2. Web Browser: Google Chrome works best
3. A high-speed internet connection
4. Microsoft Word and Microsoft PowerPoint software (a recent version)
5. Software or Program to read PDFs
6. A good soundcard and functioning speakers
7. Knowledge of how to navigate web pages and how to deal with pop-up blockers and other devices and warnings on your browser
8. Knowledge of how to download files from the internet 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
11. May need a printer

Copyright Notice: All material presented by the instructor in this online class 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 online class (course syllabus, lecture notes, lab experiments and exam reviews). 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 must only be used for your personal educational use. The downloaded material may not be altered or modified in any way. The downloaded material may not be distributed in any way.

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. This could be a friend's computer, a relative's computer, a computer at a library, or a computer at the computer lab on the Levelland or Reese campuses. It will be the student's responsibility to find an alternate computer

to avoid getting behind in the class. Internet problems and/or the crash or inoperability of a computer will not be an acceptable excuse for being late with any assignments or getting behind with the chapter modules*. It is the responsibility of the student to have a backup plan in place.* If the Blackboard server goes down, the appropriate time extensions on any quizzes 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.

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 for assistance.

SAFETY RULES: *As a faculty member, I am deeply invested in the well-being of each student I teach. I am here to assist you with your work in this course. If you come to me with other non-course-related concerns, I will do my best to help. It is important for you*

to know that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me. Dr. Lynne Cleavinger, the Director of Health & Wellness, can
advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Dr. Cleavinger at 716-2563 or lcleavinger@southplainscollege.edu or go by the Health and Wellness Center. You can schedule an appointment with a counselor by calling 716-2529

Course Schedule: CHEM1411.451

	Laboratory experiment By end of the week	**Quiz Due Thursdays**	**Exam Due Fridays**	**Lecture learning plan**
Week #1 01/18	- Safety Rules-Chemical Hygiene Plan - Sign Chemical Hygiene Plan agreement form.			- Learn chapter 1 lecture notes
Week #2 01/24	Experiment 1: Measurements	Quiz 1: ***Due Thursday 01/27***	Chapter 1 Exam ***Due Friday 01/28***	- Work on Exam 1 review before exam. - After exam, learn chapter 2 lecture notes
Week #3 01/31	Experiment 2: Density			-Continue learning chapter 2 lecture notes
Week #4 02/07	Experiment 13: Naming Compounds	Quiz 2: ***Due Thursday 02/10***	Chapter 2 Exam ***Due Friday 02/11***	-Work on Exam 2 review before exam. -After exam, learn chapter 3 lecture notes
Week #5 02/14	Experiment 3: Elements and Compounds			- Continue learning chapter 3 lecture notes
Week #6 02/21	Experiment 4: Determining the mole ratio by chemical reaction	Quiz 3: ***Due Thursday 02/24***	Chapter 3 Exam ***Due Friday 02/25***	-Work on Exam 3 review before exam. -After exam, learn chapter 4 lecture notes
Week #7 02/28	Experiment 5: Hydrates			- Continue learning chapter 4 lecture notes
Week #8 03/07	Experiment 14: Precipitation reaction	Quiz 4: ***Due Thursday 03/10***	Chapter 4 Exam ***Due Friday 03/11***	-Work on Exam 4 review before exam. - After exam, learn chapter 5 lecture notes
Spring Break				
Week #9 03/21	Experiment 6: Determination of molar mass by titration	Quiz 5: ***Due Thursday 03/24***	Chapter 5 Exam ***Due Friday 03/25***	-Work on Exam 5 review before exam. - After exam, learn chapter 6 lecture notes
Week #10 03/28	Experiment 7: Boyles' law			- Continue learning chapter 6 lecture notes

Week #11 04/04	Experiment 8: Charles' law	Quiz 6: ***Due Thursday 04/07***	Chapter 6 Exam ***Due Friday 04/08***	-Work on Exam 6 review before exam. - After exam, learn chapter 7 lecture notes
Week #12 04/11	Experiment 9: Calorimetry of metals			- Continue learning chapter 7 lecture notes
Week #13 04/18	Experiment 10: Endothermic and exothermic reaction	Quiz 7: ***Due Thursday 04/21***	Chapter 7 Exam ***Due Friday 04/22***	-Work on Exam 7 review before exam. - After exam, learn chapter 8 lecture notes
Week #14 04/25	Experiment 11-B: Atomic emission spectroscopy	Quiz 8: ***Due Thursday 04/28***	Chapter 8 Exam ***Due Friday 04/29***	-Work on Exam 8 review before exam. - After exam, learn chapter 9 lecture notes
Week #15 05/02			Chapter 9 Exam ***Due Friday 05/06***	-Work on Exam 9 review before exam. - After exam, learn chapter 10 lecture notes
Week #16 05/09			Chapter 10: Final Exam ***Due on Wednesday 05/11***	-Work on Exam 10 review before exam.