

South Plains College
Common Course Syllabus: CHEM 1406
Revised January 11, 2021

Department: Science

Discipline: Chemistry

Course Number: CHEM 1406

Course Title: Introductory Chemistry I

Available Formats: conventional, internet, flex

Campus: Levelland/Flex

Flex: This course is a flex course. That means all of the lecture portion of the class is online including exams. The lab portion will be in person on the day that you sign up for.

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. Semester Hours: 4 Lecture Hours: 3 Lab Hours: 3 Note: This course may not be substituted for CHEM 1411.

Prerequisites: None

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

Instructor: John Heh
Phone: 806.716.2323
E-mail: jheh@southplainscollege.edu

E-mail: When you have questions, problems, or comments, you can e-mail me through BlackBoard Course Messages. Please use the BlackBoard Course Messages tool to e-mail me. Do not use my South Plains College e-mail address unless it is an emergency. I will respond to your e-mail within 48 hours if I receive your e-mail between 8:00 AM Monday and 3:30 PM Thursday (excluding holidays). E-mails 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. I generally will not check my e-mail from 12:00 noon on Friday to 8:00 AM Monday of the following week. I generally will not check my e-mail during holidays. Therefore, there will usually be no response during those times.

Expectations when Corresponding: Please be polite, courteous, and respectful when using BlackBoard Course 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 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.

Online Disclaimer: This is to notify you that materials you may be accessing in chat rooms, emails, 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.

Textbooks:

1. All lecture material is provided to you in BlackBoard on PowerPoints, Word files, PDF documents, and videos.
2. The Lab Manual was included in your fees through Inclusive Access.

Supplies:

1. Scientific Calculator
2. Computer
3. Safety Glasses
4. Mask

Inclusive Access Syllabus Statement

Inclusive Access:

- **Lab Manual:** The lab manual for this course is available in digital form through the Inclusive Access program at South Plains College. That means the e-book edition of the lab manual is provided in the Blackboard portion of the course from the first day of class. The fee for the lab manual is included in the student tuition/fee payment, so there is no additional lab manual charge.
- **E-book features:** Access to a cloud-based e-reader is provided by RedShelf via Blackboard. RedShelf e-book features include the ability to hear the text read aloud, highlight, take notes, create flash cards, see word definitions, build study guides, print select pages, and download up to 20% of the book for offline access. Visit <https://solve.redshelf.com/hc/en-us/requests/new> for e-book issues and support.
- **Upgrading to a physical textbook:** Students who prefer a printed textbook rather than an e-book may purchase a loose-leaf edition from the SPC Bookstore or the textbook publisher at a reduced price.
- **How to opt out of Inclusive Access:** As long as they meet the opt-out deadline, students may choose not to participate in the Inclusive Access program if they have a textbook from another source. To opt out of the Inclusive Access e-book/resources, students will need to locate the RedShelf tool in their Blackboard course and follow the instructions given there. Students who need assistance to opt out should contact their instructor or the SPC Bookstore. The Inclusive Access fee will be refunded to students who opt out after the twelfth class day.

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
10. Knowledge of how to view and adjust videos

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.

Course Evaluation:

Lecture Exams: There will be three lecture exams covering the material that is discussed during the lecture portion of this course. The schedule for the lecture exams is given in this course information sheet. Each lecture exam will count 100 points. The lecture exams will be approximately 25 questions. The format will be multiple choice. The exams will be conducted on BlackBoard. Exams will be timed. You will have 120 minutes to finish the exam. You may only open the exam once, and it must be finished in one sitting.

Exam 1 (Chapters 1, 2, 3): 100 points

Exam 2 (Chapters 4, 5, 6): 100 points

Exam 3 (Chapters 7, 8, 9): 100 points

The material scheduled for each lecture exam is subject to change. Changes will be announced if necessary.

There will be no make-ups for lecture exams unless a student is hospitalized due to COVID. This will require documentation to be provided to the Dean of Students and/or the Associate Director of Health & Wellness. All other missed lecture exams will receive a grade of zero.

Homework: Homework will be in the form of practice problems on the power points. The practice problems will not be collected and graded. It is essential that the practice problems be completed, as the practice problems will be very similar to the types of problems encountered on the exams.

Lab Exercises on BlackBoard: There will be 8 lab exercises on BlackBoard. The lab exercises are designed to acquaint you with the experiment(s) before you come to campus and perform the experiment(s). The lab exercise must be completed by 11:59 PM of the Sunday before that week's experiments. The schedule for the lab exercises is given in this course information sheet. Since we will have 8 weeks of experiments, there are 8 lab exercises. Each lab exercise will count 5 points. The lab exercises will be approximately 5 questions. The format will be multiple choice. The lab exercises will be conducted on BlackBoard. Lab exercises will be timed. You will have 60 minutes to finish the lab exercise. You may only open the lab exercise once, and it must be finished in one sitting.

8 Lab Exercises (5 points each):

40 points total

There will be no make-ups for lab exercises unless a student is hospitalized due to COVID. This will require documentation to be provided to the Dean of Students and/or the Associate Director of Health & Wellness. All other missed lab exercises will receive a grade of zero.

In-Person Lab Experiments: The in-person lab experiment portion of this class will be comprised of topic discussion, homework problems practice; and most commonly, lab experiments. The in-person lab portion of this course will consist of group work.

Lab Completion Grade: The lab completion grade will come from 8 lab completion grades. We have 8 days of in-person labs planned. For each day, I will walk by each lab group and check your work. If the work is completed, you will receive the full lab completion grade. If the work is not complete, then I will ask you to continue until it is. And then you will get the lab completion grade. The lab completion grade is a total of 12 points for each lab day that we meet in-person.

8 Lab Completion Grades (12 points each): 96 points total

The material scheduled for each lab is subject to change. Changes will be announced if necessary.

If a student is absent during the lab day, arrangements can be made to make up the lab doing an alternative exercise.

Final Exam: The final exam will not be comprehensive. *There will be no make-up exam for the final exam. A missed final exam will receive a grade of zero.* The time of the final exam is given in this course information sheet. The final exam will count 100 points. The final exam will be approximately 40 questions. The format will be multiple choice. The final exam will be conducted on BlackBoard. The final exam will be timed. You will have 120 minutes to finish the final exam. You may only open the final exam once, and it must be finished in one sitting.

Final Exam (Chapters 10, 11, 12): 100 points

The material scheduled for the final exam is subject to change. Changes will be announced if necessary.

Final Course Grade: At the end of the semester, all of your points earned will be added together. Your final course grade will come from your point total. The point totals and their corresponding final course grades are listed below:

Point total:	Final Course Grade:
478 and above	A
423 – 477	B
369 – 422	C
316 – 368	D
0 – 315	F

Attendance Policy: Students are expected to login frequently in order to be successful in this course. A student will be administratively withdrawn from this course when absences become excessive. If you miss a total of 3 lecture exams, you may be dropped from the course with a grade of X. Absences caused by official South Plains College activities will be excused. No other absences will be excused. 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. This is in accordance with the policies set forth in the SPC General Catalog. 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 this class (by logging into the course on BlackBoard) after official enrollment, absences will be attributed to the student from the first class day. Students who enroll in a course but have "Never Attended" (by not logging into this course on BlackBoard) by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. This course information sheet contains the schedule of lectures and labs. If you are unable to finish this course, complete a withdrawal slip at the registrar's office.

Plagiarism and Cheating: Students are expected to do their own work on all projects, quizzes, assignments, examinations, and papers. Cheating will not be tolerated. If a student is caught cheating on an exam or lab report, a grade of zero will be given for that exam or lab report.

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 for assistance.

COVID-19 Statement: It is the policy of South Plains College for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or dedens@southplainscollege.edu.

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.

Lab Safety: The chemistry laboratory is a potentially hazardous environment. Therefore, all students must follow all of the safety rules passed out to you during the safety presentation. The students must also follow any specific safety rules listed in the lab manual and any that the instructor may announce during a lab period. A student not following the safety rules may be asked to leave the laboratory.

Safety Rules: These safety rules will be passed out in lab. The safety rules must be followed. Failure to do so can result in you being asked to leave the laboratory. You will be required to sign a sheet indicating you have read and agreed to follow the safety rules before being allowed to perform an experiment.

BlackBoard: The lecture portion of this course is completely online and is conducted through BlackBoard. BlackBoard may be accessed at <https://southplainscollege.blackboard.com/> For help concerning the use and features of BlackBoard you can access the help menu at the left side of each BlackBoard page that you visit.

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 (class information sheet, course orientation, and chapter 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 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. If your computer crashes during a lab report or an exam, contact me immediately so that I can reset the lab report or exam for you. 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 lab reports or exams 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.

Course Schedule: The following table contains the tentative course schedule. All material (including lecture material, experiment material, and material scheduled for the lecture exams) is subject to change. Also, all dates are subject to change. Changes will be announced if necessary. Make note of the bold parts.

WEEK		LECTURE	LAB EXERCISES	LAB (M OR W)
1	WEEK OF JAN 17	CHAP 1 OPENS JAN 19, 8 AM		NO LAB, DO NOT COME
2	WEEK OF JAN 24	CHAP 2 OPENS JAN 25, 8 AM	LAB EXERCISE 1 DUE JAN 24 11:59 PM	LAB COMPLETION GRADE 1: SAFETY, EXP 1 & 2
3	WEEK OF JAN 31	CHAP 3 OPENS FEB 1, 8 AM	LAB EXERCISE 2 DUE JAN 31 11:59 PM	LAB COMPLETION GRADE 2: EXP 3 & 5
4	WEEK OF FEB 7	CONTINUE WITH CHAP 1, 2, 3		OPTIONAL EXAM 1 REVIEW
5	WEEK OF FEB 14	FEB 15: EXAM 1 AVAILABLE FROM 8 AM TO 8 PM, CHAP 4 OPENS 8 AM		NO LAB, DO NOT COME
6	WEEK OF FEB 21	CHAP 5 OPENS FEB 22, 8 AM	LAB EXERCISE 3 DUE FEB 21 11:59 PM	LAB COMPLETION GRADE 3: EXP 7 & 8, WORKSHEET
7	WEEK OF FEB 28	CHAP 6 OPENS MAR 1, 8 AM	LAB EXERCISE 4 DUE FEB 28 11:59 PM	LAB COMPLETION GRADE 4: EXP 9, REVIEW FOR EXAM 2
8	WEEK OF MAR 7	MAR 8: EXAM 2 AVAILABLE 8 AM TO 8 PM, CHAP 7 OPENS 8 AM		NO LAB, DO NOT COME
SPRING BREAK				
9	WEEK OF MAR 21	CHAP 8 OPENS MAR 22, 8 AM	LAB EXERCISE 5 DUE MAR 21 11:59 PM	LAB COMPLETION GRADE 5: EXP 10 & 11, WORKSHEET
10	WEEK OF MAR 28	CHAP 9 OPENS MAR 29, 8 AM	LAB EXERCISE 6 DUE MAR 28 11:59 PM	LAB COMPLETION GRADE 6: EXP 12, WORKSHEET
11	WEEK OF APR 4	CONTINUE WITH CHAP 7, 8, 9	LAB EXERCISE 7 DUE APR 4 11:59 PM	LAB COMPLETION GRADE 7: REVIEW FOR EXAM 3
12	WEEK OF APR 11	APR 12: EXAM 3 AVAILABLE 8 AM TO 8 PM, CHAP 10 OPENS 8 AM		NO LAB, DO NOT COME
13	WEEK OF APR 18	CHAP 11 OPENS APR 19, 8 AM	LAB EXERCISE 8 DUE APR 18 11:59 PM	LAB COMPLETION GRADE 8: EXP 13, WORKSHEET
14	WEEK OF APR 25	CHAP 12 OPENS APR 26, 8 AM		NO LAB, DO NOT COME
15	WEEK OF MAY 2	CONTINUE WITH CHAP 10, 11, 12		NO LAB, DO NOT COME
16	WEEK OF MAY 9	MAY 10: FINAL EXAM 8 AM TO 8 PM		NO LAB, DO NOT COME