TEXAS A&M UNIVERSITY SAN ANTONIO

General Chemistry Laboratory - CHEM 1112 Syllabus

Instructor: Samantha Zepeda
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Office Hours: 10:00-11:00 am MWF, and by appointment
Class Hours: M 6-8:45 pm
Class Location: STEM 321 (aka Sci Tech)
Office Location: STEM 311

Course Description

This is the accompanying laboratory for CHEM 1312: General Chemistry II. The first semester of a two-semester sequence, the lab introduces many chemical concepts, problems, and calculations. Topics range from taking measurements, calibration, and statistical analysis, densities of solids through linear least squares analysis, verification of Boyle's Law, Charles' Law and Avogadro's Law, empirical formula of compounds, introduction to calorimetry, heat of chemical reactions, introduction to Acid-Base Chemistry, introduction to pH, and gravimetric analysis. **Prerequisite:** CHEM 1311 and 1111 and MATH 1314 or equivalent. **Corequisite**: CHEM 1312.

Course Materials

Laboratory handouts: You must print off a copy of all handouts from Blackboard before each lab session. All data should be collected with BLUE or BLACK NON-ERASABLE PEN. FIVE POINTS WILL BE DEDUCTED FOR DATA RECORDED IN PENCIL. Refer to attached schedule for the sequential list of labs.

Calculator: Any calculator is acceptable.

Proper Clothing for lab: closed-toe shoes that covers your foot in its entirety, NO shorts or short skirts, NO mid-riff shirts. NO tank tops. NO ¾ length pants. NO pants with holes. ***THIS POLICY WILL BE STRICTLY ENFORCED AND STUDENT IN NONCOMPLIANCE MAY BE DISMISSED FROM THE LABORATORY AND WILL A RECEIVE NO CREDIT FOR THAT WEEK'S EXPERIMENT.*** We take **YOUR** safety in the laboratory very seriously and we expect the same from you.

Goggles

Goggles **MUST** be worn properly in the laboratory **AT ALL TIMES**. If you are in the laboratory, you must wear googles. Goggle loaners are available while supplies last. Students who do not have goggles will not be allowed to work on that week's lab and will receive no credit for that lab.

Lab coats

Lab coats must also be worn properly during all laboratory activities. Lab coats may be available for $2 on a first-come, first-served basis. Availability of a rental is not guaranteed. Students who do not have a lab coat will not be allowed to work on that week's lab and will receive no credit for that lab. Prior to leaving the lab classroom, students must remove their lab coats. PPE worn in the lab is not to be worn outside the lab classroom.

Masks. may be worn while in the lab, but it is not mandatory.

Learning Objectives
By the end of this course students will be able to:

1. Demonstrate their understanding of safe laboratory practices, such as responsible disposal techniques and proper use of personal protective equipment (PPE) while performing experiments.
2. Identify the categories of hazards associated with chemicals and use Safety Data Sheets (SDS) as well as reference materials.
3. Apply the chemistry concepts learned in CHEM 1312 to the design, execution, and analysis of chemical experiments.

Student responsibilities
IMPORTANT. Each student receives this information during the first lecture. It is your responsibility to read this material and be familiar with the course content, procedures, and grading.

Communication. The best way to contact instructors is via email. All correspondence between professors and students must occur via University email accounts. All students have a Jaguar email account ready and working. If it is not working, contact the help desk at sahelp@tamusa.tamus.edu or at 210-784-4357. Students are expected to access Blackboard for updates on the course, announcements and other course materials. All students are strongly encouraged to come to office hours or make appointments at other times to discuss course material and ask questions. Discussions concerning grading/grades will not be addressed through email and will only be discussed during office hours or scheduled appointments.

Attendance Policy. All students are expected to attend all laboratories and be fully and actively engaged in lab activities. Attendance will be monitored. Absences will be excused if due to illness (medical excuse), death of a close family member, religious holiday (please inform instructor), official university activity, cancellation of classes/closure of the University, military duties, pregnancy & related conditions, or participation in legal proceedings. Only **one** laboratory will be excused for the above reasons.

BE PROMPT. Tardiness will not be tolerated. Two points from your experiment grade will be deducted for every minute you are late. Pre-lab lecture and lab attendance will be taken at the beginning of each meeting.

Late Work Policy. 20% deduction for every day late. No work will be accepted 3 days after the due date.

Late Arrivals: Punctuality is essential to maintaining a safe and efficient laboratory environment. Timely arrival ensures that you are present for important safety instructions and lab procedures. A point from your experiment grade will be deducted for every minute you are late, up to 10 minutes. If a student arrives more than 10 minutes late, they will not be permitted to participate in the lab for that day. This will result in a grade of "0" for that week's lab report. Please plan your schedule accordingly to ensure prompt attendance at every lab session.

Quizzes: There will be a 10-minute quiz at the beginning of each lab period. It will cover the material for the new lab as well as the material from the week before. No extra time will be given for late arrivals.

Lab Partners: Students will work in groups of two unless directed otherwise by the instructor.

Visitors: Only students enrolled in the course are allowed in the classroom. No visitors are allowed.

Conduct and Behavior. As an instructor, my goal is to create a safe and engaging learning environment. Class disruptions are unacceptable, asking questions to clarify material during class does not qualify as a disruption and is encouraged. If you are disrupting the class, you will be asked to leave for the day. Technology in the classroom may be a great a resource but it can also hinder the learning process. Therefore, students are not allowed to wear ear buds and headphones and/or use cellphones during class. All cellphones must be on vibrate or turned off for the entirety of the class/lab period. In case of an emergency call, leave the room before answering the call. Texting during class is absolutely prohibited. The use of laptops, tablets or other devices for non-class related activities is not allowed.

Electronic Devices during Exams. All electronic devices must be completely stored during exams and quizzes. Academic misconduct and attempts to cheat during the exam will be pursued according to Texas A&M-San Antonio code of conduct policy. You are discouraged from leaving the room during an exam. If you need to use the restroom, ask and leave all electronic devices with the instructor.

Aggressive Behavior. The academic environment is meant for discussing ideas in a respectful manner. Tolerance, empathy, respect and courtesy help us create a safe environment. Abusive and aggressive behavior will result in contacting the University Police Department and immediate removal of the student from the classroom.

AI policy: This class assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

Student Misconduct. Appropriate conduct is essential to the effective functioning of the University. University policy defines unacceptable conduct, both academic and non-academic misconduct, and penalties for such behavior in The Student Handbook and The Student Code of Conduct.

Academic Misconduct Policy. Students at Texas A&M University-San Antonio are expected to adhere to the highest standards of academic honesty and integrity. Academic misconduct for which a student is subject to penalty includes cheating, plagiarism, fabrication, multiple submissions, misrepresentation of academic records, facilitating academic dishonesty, unfair advantage, violating known safety requirements and ethical misconduct. This includes holding other students to the same standards and reporting any incidents of alleged violation of the honesty policy to the instructor involved or, if necessary, to the appropriate academic department head. All students are responsible for being familiar with the Academic Misconduct Policy, which may be found in the Texas A&M University-San Antonio Student Handbook.

University policy prescribes serious consequences for acts of academic misconduct including, but not limited to, a grade of 'F' on the particular paper or assignment or a failing grade in the course. Also, a referral may be issued to the Office of Student Rights and Responsibilities where the sanctions can vary up to possible expulsion from the University. Considering the potential consequences of academic misconduct, it is obviously in students' best interests to avoid even the appearance of such behavior. If you are ever unclear whether a specific act might constitute academic misconduct, please contact your instructor for an assessment of the situation.

All written assignments must be worked on individually. All student term papers and other written assignments are subject to analysis by anti-plagiarism software. Plagiarism will result in a grade of a zero for the assignment.

Tentative Schedule*

Week	Week	Laboratory
1	Jan 19-20	**MLK Jr. Day- No Labs**
2	Jan 26-27	Introduction, Syllabus, Safety training
3	Feb 2-3	Molecular modeling
4	Feb 9-10	Volume and Mass Measurement
5	Feb 16-17	Beer's Law
6	Feb 23-24	Colligative Properties / Introduction to infographic project
7	Mar 2-3	Factors Affecting Rate Laws
8	Mar 9-10	**Spring break- No Labs**
9	Mar 16-17	Crystal Violet Kinetics/Infographic Topic due
10	Mar 23-24	Percent Copper in Brass
11	Mar 30-31	**Work on infographics**
12	Apr 6-7	pKa and Molar Mass of Acids I/Infographic rough draft due
13	Apr 13-14	pKa and Molar Mass of Acids II
14	Apr 20-21	Thermodynamics of KNO_3
15	Apr 27-28	Electrochemistry/Final infographic due Friday 11:59pm
16	May 4-5	**Final week- No labs**

***These are the tentative topics. Instructor reserves the right to make changes as deemed necessary.**

Data Sheets and Excel files: Data sheets are due on Thursday by 11:59pm. Data sheets must be uploaded on blackboard as **pdf files**. If an Excel file is required, it should also be uploaded in blackboard in the original **Excel** format.

Grading:

10 labs, 40 points each:	400 points
10 quizzes, 10 points each:	100 points
Group project/assessment	80 points
TOTAL:	**580 points**

There will be NO extra work given. Laboratory worksheets/reports are the only opportunities students have to earn points in this course.

Your grade: $\left(\frac{\text{Total points earned}}{580}\right) * 100$

All laboratory report/worksheet grades will be posted to Blackboard. However course percentages, letter grades, etc. are not to be considered as official and students should use caution when using those to evaluate overall course grades. To calculate your, grade use the equation above. Using that equation, letter grades will be determined as:

A: 90.0-100%;
B: 80.00-89.99%,
C: 70.00-79.99%;
D: 60.00-69.99%;
F: <60.0%