TEXAS A&M UNIVERSITY
SAN ANTONIO

College of Arts & Sciences

General Chemistry I Laboratory - CHEM 1111-02L Syllabus

Instructor: Mohamed Hassan
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Office Hours: Friday 10 am-12 am, SciTech 311H

Lab Hours: W 11am-1:45am
Class Location: SciTech 321

Course Description

This is the accompanying laboratory for CHEM 1311: General Chemistry I. 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: MATH 1314 or equivalent. Corequisite: CHEM 1311.

Course Materials

Laboratory Handouts: You must print a copy of all handouts from Blackboard before each lab session. Reports are submitted with permanent blue or black non-water-soluble ink. Five points are deducted for data recorded in pencil. Refer to attached schedule for the sequential list of labs. The completed laboratory handouts (i.e. laboratory reports) in PDF format are due at the end of the day in which the laboratory experiment was performed unless otherwise stated in Blackboard. All students submit individual reports for grading.

Calculator: scientific/engineering calculator. Examples of acceptable calculators include TI30Xa and TI36X.

Proper attire for lab:

A) Closed-toe shoes that covers your foot in its entirety.
B) The following list is NOT appropriate lab attire:
Shorts, skirts, mid-riff shirts. tank tops. ¾ length pants. pants with large holes.
C) Lab coats
D) Approved safety googles THIS POLICY WILL BE STRICTLY ENFORCED AND STUDENT IN NONCOMPLIANCE WILL BE DISMISSED FROM THE LABORATORY AND WILL 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 and laboratory coats are ALWAYS worn properly in the laboratory. Your instructor may change goggle/lab coat wear depending on the laboratory activity.

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 1311 to the design, execution, and analysis of chemical experiments.

Communication: The best way to contact instructors is via email. All correspondence between professors and students must occur via Texas A&M University San Antonio email accounts. Students are expected to access Blackboard regularly 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.

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: 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 disrupt the class, you will be asked to leave for the day. Technology in the classroom may be a great 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 vibration mode 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.

Academic Calendar: The complete academic calendar and final exam schedule are available online at https://www.tamusa.edu/academics/academic-calendar/index.html . Please be familiar with important dates.

Tentative Schedule[⊗]

Week #	Week of	Experiment
1	Jan 21-23	Introduction, Syllabus, Safety training
2	Jan 28-30	Volume and Mass Measurement
3	Feb 4-6	Density of Metals
4	Feb 11-13	Introduction to Excel
5	Feb 18-20	Measurement and Error Part 1 **and** Part 2
6	Feb 25-27	Empirical Formula
7	Mar 4-6	Texas Limestone- Part I
8	Mar 11-13	**Spring break-no labs**
9	Mar 18-20	Texas Limestone- Part II
10	Mar 25-27	Titrations
11	Apr 1-3	**Study day- no labs**
12	Apr 8-10	Molar Mass of Butane
13	Apr 15-17	Thermochemistry Lab: Calorimetry and Heat of Solution.
14	Apr 22-24	Cooling with Chemistry- Instant Cold Packs Experiment
15	Apr 29-May 1	Cooling with Chemistry- Instant Cold Packs Experiment Cont'd Final poster due May 11:59pm
16	May 6-8	**Final week- No labs**

[⊗]These are the tentative topics. The instructor reserves the right to make changes as deemed necessary.

Data Sheets and Excel files: Data sheets are due Sunday 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.

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

Grading:

10 laboratory worksheets x 40 points each = 400 points

10 Quizzes x 10 points each= 100 points

1 Poster=80 points

There will be NO extra credits. Laboratory worksheets/reports are the only opportunities students have to earn points in this course. Worksheets will be graded based on completeness, accuracy, and correctness.

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:

Letter Grade:	**A**	**B**	**C**	**D**	**F**
% of Total Points:	**90.0 - 100%**	**80.0 - 89.99%**	**70.0 - 79.99%**	**60.0 - 69.99%**	**0 - 59.99%**

Should you have a question concerning the way that your lab was graded, or if you think that there was an error in calculating the lab score, then it is your responsibility to bring the matter to the attention of the instructor within three calendar days of the date when your lab score was updated on your blackboard.