

**Dr. Zall's Office Hours: Monday, 2pm-3pm, CFS 304**

**Course Overview:**

In this course you will learn common laboratory techniques for determining physical properties, reaction stoichiometry, separation, and identification of chemical substances.

This lab counts for 20% of your overall grade in Chem 1411. In order to make a C or better in Chem 1411, you must earn at least a C in both the lecture AND lab portions of the course.

**Required Texts and Course Materials:**

- *General Chemistry Laboratory Manual for Chemistry 1411*, SHSU Faculty and Staff
- Texas Instruments TI-30-series calculator
- Scantron 882-e or compatible testing forms (one each for lab midterm and final exams)
- Safety Glasses or Goggles
  - Properly fitting protective eyewear with side shields can be purchased from the chemistry club in the CFS building or at a home improvement store.
  - Standard eyeglasses are NOT sufficient protection.

**Lab Schedule**

Date	Lab Experiment (Experiment Number)
Week of 2/5	Lab 1a: Check-in, Basic Techniques
Week of 2/12	Lab 2: Physical Properties and Changes
Week of 2/19	Lab 7: Formula Stoichiometry
Week of 2/26	Lab 4: Reactions of Copper
Week of 3/5	Lab 8: % by Mass of an Unknown Mixture
Week of 3/12	<b>No Labs – Spring Break</b>
Week of 3/19	Lab Midterm Exam <i>and</i> Lab 5: Graphing
Week of 3/26	Lab 11: Acid-Base Titrations
Week of 4/2	Lab 9: Chemical Reactions and Stoichiometry
Week of 4/9	Lab 12: Specific Heat
Week of 4/16	Lab 3: Lewis Structures and Periodic Properties
Week of 4/23	Lab Final Exam and Checkout
Monday, 4/30	Date of Cumulative Make-Up Exam, if necessary

**Labs do not start until the week of Feb. 5**

The schedule of labs is **NOT** the same as their order in the lab manual. The lab numbers used throughout this course will refer to the experiment numbers in the lab manual. For instance, the lab experiment covered in the third week is Lab #7.

**Find the location and time of your lab section in the table below**

Day	Meeting Time	Location: CFS 107	Location: CFS 111
Monday	12:00-2:50	Section 19	Section 11
	3:00-5:50	Section 23	Section 15
Tuesday	12:30-3:20	Section 21	Section 13
	3:30-6:20	Section 24	Section 17
Wednesday	12:00-2:50	Section 20	Section 12
	3:00-5:50	_____	Section 16
Thursday	12:30-3:20	Section 22	Section 14
	3:30-6:20	_____	Section 18

### **Preparation, Conduct, and Grading of Lab Experiments:**

- 5 points per lab experiment (20% of your grade for each lab) are assigned based on your ability to correctly follow the experimental procedure and the instructions of your instructor. You must come to each lab prepared for that day's experiment and must follow the instructions in the lab manual and any additional directions provided by your TA. Your TA assigns these "daily" points based on his or her observation of your work.
- In addition, most labs will start with a quiz (10 points, or 40% of the grade for each lab). These quizzes will include questions on that day's procedure as well as questions similar to those in the previous lab experiment's writeup. You will need to be prepared, having read that day's procedure, to pass these quizzes. Your failure to follow the instructions from the lab instructor, especially on issues such as lab safety and waste disposal, can also result in expulsion from the lab and forfeiture of ALL lab points for that day.
- The final 10 points (40%) of each lab's grade come from the lab writeup. These are the questions included towards the end of each lab procedure in your manual. You must answer these, tear the pages out of the manual, and turn them in to your TA, *before leaving lab*. Late writeups will not be accepted by your TA. If the lab period ends before you complete the experiment or the writeup, you must turn in whatever you have completed at that point.
- **Eye protection is REQUIRED** in all labs during every lab experiment. Failure to wear approved eyewear may result in expulsion from the lab and forfeiture of the lab points for that day.
- No electronic devices other than an approved (TI-30 model) calculator may be used in the laboratory. All other devices must be turned off and put away. If you need to use your cell phone, you must leave the lab.

**Equipment and Lab Drawers:** If you check into a lab drawer it is mandatory that you check out, even if you end up dropping the course. Failure to check out of your drawer will result in a \$25.00 charge in addition to any breakage or loss that has accrued. This may cause you to be unable to register for the next semester at Sam Houston State University.

- If you share a drawer with a partner then it is both of your responsibilities to make sure that the drawer has been properly checked out.
- The chemistry department is not responsible for anything in the drawer while it is checked out to you; that's why you will lock your drawer between lab classes. Anything lost by you or your partner is still your responsibility. This includes lab glasses, goggles, data, lab notebooks, glassware, etc. Drawers left unlocked by a student will be charged a fee that will be added to the breakage fee.

**Attendance:** Students are required to attend all regularly scheduled laboratories. Absences may be excused for mandatory official university or military functions or for serious medical issues. For an absence to be excused, you must notify your TA or Dr. Zall as soon as you know that you will miss lab, and provide written documentation from, e.g., a doctor or military commander at the next lab you attend.

- Labs missed due to excused absences will not count against your grade.
- A single unexcused lab's zero will be dropped from the calculation of your final grade. After this you will receive a zero for each additional unexcused absence.
- **You may never attend any other lab section to make up missed laboratories.**

**Midterm and Final Exams:** Scantron-based (multiple-choice) exams will be held on the dates indicated on the first page of this syllabus. The midterm will cover material from the first 5 lab experiments and the final exam will cover material from the final 5 lab experiments. Questions will be multiple-choice format and will cover all material encountered in the respective experiments, including but not limited to procedures, techniques, and safety considerations used in these experiments, chemical reactions or calculations encountered in the labs or the writeups, or analogous reactions and calculations. In short: if a question appeared in a lab writeup, you should expect that a similar question might appear on the exams.

**Make-up Exams:** if you missed or expect to miss **either** the Midterm **or** the Final exam, you may schedule a makeup **Cumulative** exam given on **4/30/18** at 12:00 noon. in Rm. CFS101. You must contact Dr. Zall (at 294-1525 or zall@shsu.edu) **by 5 pm the previous Friday (4/27/18)** to be allowed to take that make-up. If you miss the midterm you still need to take your lab's scheduled final in addition to the makeup test.

**Grading:** Your lab TA does not assign letter grades for the course, and any statement written or verbal from your TA to you about your probable final grade in CHEM 1411 is not binding. Your lab points will be used as a raw score to calculate your grade. Do not call the Chemistry office or your lecture instructor and ask for your lab score/grade/points; they won't have that information. You are responsible for keeping track of quizzes (20%), lab reports (40%), and mid- and final-exam grades (20% + 20%) as they are handed back to you.

The table on the following page is one way of calculating your raw score. Remember that the TA doesn't assign grades. They just keep track of your points. Final CHEM 1411 lab grades will be posted online approximately two weeks after your final. Final grades are determined as follows: >90% = A; >80% to <90% = B; >70% to < 80% = C; >60% to <70% = D; >60% = F.

Lab Experiment (max 25 points)	Record your points earned for each week's lab here	Example
1a		10
2		22
7		19
4		23
8		17
5		12
11		24
9		18
3		21
12		17
<i>Total Daily Labs: Drop the lowest score above and any excused absences, and divide by the number of points possible for the labs that remain, then multiply by</i>	This cell is "A"	$=(173/225)*100%$  = 76.9%
<i>Midterm Exam %</i>	This cell is "B"	80.0%
<i>Final Exam %</i>	This cell is "C"	75.0%
<b>Total Raw Score in Lab</b>	$=(A \times 0.6)+(B \times 0.2)+(C \times 0.2)$	<b>= 77.1%</b>

**Academic Honesty:** The University expects all students to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Students in CHEM 1411 laboratory are required to attend and take data in the laboratory for each scheduled lab. Previous data from or experience with this laboratory does not free you from ANY requirements for this laboratory. You must attend and perform all the scheduled experiments. Using data from someone else's lab or from a previous semester in which you were enrolled in this course is **plagiarism** and will be dealt with as the Code of Student Conduct and Discipline states—You must take the data in this lab even if you took the lab before in another semester. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. Furthermore, the University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or lab quiz, copying lab data from previous reports or the reports of other students, collusion, and the abuse of resource materials.