


<b>CHEM 1115 Honors Chemistry Laboratory I</b>		
<b>Professor</b>		<b>Sections</b>
	Dr. John W. Sibert	HN1
<b>Term</b>	<b>Fall 2016</b>	
<b>Meetings</b>	Workshop: SLC 2.203 Lab: SLC 3.220	

### Professors' Contact Information

Phone	Office	Email Address	Office Hours
972-883-2918	SLC 3.520	sibertj@utdallas.edu	M, T 2 – 3 PM

### General Course Information

<b>Pre-requisites, Co-requisites, &amp; other restrictions</b>	One year of High School Chemistry. No Audits allowed.
<b>Course Description</b>	This course reinforces the concepts of Freshman Chemistry in the lab via experiments. Students are offered the opportunity to acquire basic laboratory skills and an appreciation for the presence of chemistry in daily living. The experiments are designed to demonstrate concepts including properties of inorganic substances, principles of structure and bonding, and elementary quantitative analysis.
<b>Expected Learning Outcomes</b>	<i>Students should be able to:</i> <ol style="list-style-type: none"> <li>1. Explain the importance of Lab Safety</li> <li>2. Collect and organize data in written laboratory reports</li> <li>3. Measure properties of chemical substances</li> <li>4. Perform stoichiometric reactions</li> <li>5. Learn the technique of titration</li> </ol>
<b>Required Texts &amp; Materials</b>	An Atoms First Approach to the General Chemistry Laboratory, 2 <sup>nd</sup> edition ISBN : 9780077646424 (Two-semester) 9781308162027 (One Semester) <ul style="list-style-type: none"> <li>• Z-87 rated Safety Glasses or Goggles</li> <li>• Access to eLearning is needed to complete your safety quiz</li> </ul>
<b>Supplemental Texts, Readings, &amp; Materials</b>	<ul style="list-style-type: none"> <li>• Students are financially responsible for items checked out such as glassware and instruments</li> <li>• Other course materials may be recommended or required</li> </ul>
<b>Class Attendance</b>	<i>Make up laboratories are difficult to accommodate. As such, it is anticipated that you will attend all laboratory periods.</i> <b>No cell phones or computers are allowed in the chemistry laboratories. If you need to make an emergency phone call, please step outside.</b>

## Assignments & Academic Calendar- CHEM 1115

**This schedule and timeline are subject to change at the discretion of the lab coordinator.**

<b>Date</b>	<b>Exp. #</b>	<b>Experiment</b>	<b>Report Due</b>
<b>8/30</b>		Syllabus/Check-in/Lab Safety	Lab safety quiz
<b>9/06</b>	3	Light and Nanotechnology	9/09
<b>9/13</b>	4	Atomic Structure	9/16
<b>9/20</b>	5	Periodic Trends	9/23
<b>9/27</b>	2	The Chemistry of Copper	9/30
<b>10/04</b>	-	Bonding	10/07
<b>10/11</b>	6	Molecular Geometry and Polarity	10/14
<b>10/18</b>	7	Gravimetric Analysis	10/21
<b>10/25</b>	8	Limiting Reactant	10/28
<b>11/01</b>	9	Qualitative Analysis	11/04
<b>11/08</b>	10	Titration I	11/11
<b>11/15</b>	12	Calorimetry	11/18
<b>11/22</b>		<b>Fall Break</b>	
<b>11/29</b>	14	Capstone: Airbag Lab & Check out	11/29

## Course Policies

<b>Safety</b>	<p><b>IMPORTANT:</b> In accordance with University and Chemistry Department safety rules, any time anyone (student, TA, instructor, or visitor) is in a lab, Z87-rated safety eyewear must be worn. <u>The first violation</u> in the semester will result in a warning and removal from the lab until the safety eyewear is in-place. <u>The second violation</u> in the semester will result in dismissal from that lab period with no extra time being allowed for make-up of the work scheduled for that lab period. Similar penalties will apply if any other safety rules are violated. <b>Please see “penalty points” for details.</b> In summary, all students are responsible for all information inside the undergraduate safety manual; it is located at:</p> <p style="text-align: center;"><a href="http://www.utdallas.edu/nsm/chemistry/resources/safety.html">www.utdallas.edu/nsm/chemistry/resources/safety.html</a></p> <p>In addition arms, legs and feet should be covered in lab. Short pants and skirts (which expose calves or thighs) are not allowed. Sleeveless shirts (including spaghetti strap shirts), or shirts that expose your midriff are also not allowed—however, a lab coat may be worn over these shirts during lab. <b>Closed-toed shoes that fully cover your foot are also required.</b> Hair longer than shoulder length must be tied in an appropriate manner to keep it out of harm’s way.</p>
<b>Safety Quiz</b>	<p>Login to the elearning lab course.</p> <p>Read the syllabus and the three safety documents in the safety folder.</p> <p>A safety quiz will pop-up ONLY after you have reviewed the safety documents.</p> <p>Begin the safety quiz. You have multiple attempts to obtain a 100% on the safety quiz. Your grade for this quiz will count as a workshop grade.</p>
<b>Pre-lab</b>	<p>Each week students are expected to prepare for the lab by reading and understanding the experiment. The workshop (see below) are designed to ensure that all are engaged and ready to perform the laboratory experiment.</p>
<b>Workshops</b>	<p>Students will work in groups during the first 45 min of the lab period. Workshops are <i>open discussions</i> designed to help you understand the concepts and techniques involved in each experiment. The goal here is to make the lab experience more enjoyable by assisting students to reach a basic, overall understanding of the experiment and the science. You need to read and gain an initial understanding the lab prior to the lab period in order to be better prepared for both the <u>Workshops</u> and the <u>Experiments</u>. Student work in the workshop will be collected at the end of the workshop period. Workshops count for 10% of the course grade.</p>
<b>Lab Etiquette</b>	<p>Each student will be evaluated with respect to their adherence to good safety practices, advanced knowledge of the day’s experiment and the equipment involved, laboratory technical skills, and laboratory etiquette/professionalism.</p>
<b>Lab Write-Ups</b>	<p>There are no formal lab reports required for this course. However, you will turn in the data sheets with all the required information for each experiment. Where appropriate, it is essential that you include calculations, detailed observations, balanced equations, percentage error, a brief conclusion of the experiment, etc. Write-ups are due on the Friday (1:00 PM) following the laboratory period in which the experiment was completed. For example, if an experiment is performed on Tuesday, September 06, the write-up for that exp. will be due at 1:00 PM on Friday, September 09. Lab reports submitted later on the same day will receive a 5 point deduction. Any further LATE lab reports will be accepted but will receive a 10 point deduction <b>EACH DAY</b> it is late.</p>
<b>Data</b>	<p>Any data you collected during the experiment must be written in pen. In case of wrong entries, make a new table and explain what happened. Do not erase any original data. Use scientific notations to improve accuracy. 0.000789 does not equal to 0.0008, it’s <math>7.89 \times 10^{-4}</math>. Calculating this way might improve % error. Keep all the data and calculations neat. If we can’t read them, obviously we cannot grade them. Before you leave the lab, the TA must review and sign your data sheet.</p>
<b>Clean-Up</b>	<p>Leave sufficient time at the end of laboratory period for cleaning up. Make sure you thoroughly clean all the equipment, glassware and also clean-up your bench. If you do not comply with cleanup and other general rules pertaining to the lab, your grade for that lab will be lowered.</p>

<b>Penalty Points</b>	<p>Points can be deducted from your final grade to each experiment for any of the following reasons:</p> <ul style="list-style-type: none"> <li>Lack of participation in the workshop and/or the laboratory (absent* or inattentive)</li> <li>Late lab report <b>10 points per day late</b></li> <li>Late lab report (same day late submission) <b>5 points</b></li> <li>Safety violations (see posted notes for details)</li> <li>Illegible handwriting or computer generated work (unless otherwise arranged)</li> <li>Calculations that are not complete or cannot be followed</li> <li>Misuse of laboratory time (e.g. using cell phone)</li> <li>Failure to clean up equipment, glassware, working area, community equipment (e.g. balance)</li> <li>Any student who does not attend the workshop will not be permitted to perform that day's experiment. <b>After a 10 minute grace period, students will not be allowed to attend the workshop and the lab. At the discretion of the instructor, under extenuating circumstances, the student may be allowed to participate in the lab but all points for the workshop will be deducted.</b></li> </ul>								
<b>Chemistry Stockroom SLC 3.221</b>	<p>Broken items will need to be replaced by filling out a breakage form with the appropriate information. The TA will assist in filling the breakage form and submitting it to the Chemistry stockroom manager along with a copy of your comet card. Broken charges are summed and entered into your account at the end of the semester.</p> <p>You are also required to go to the Bursars office and pay for any items in your lab drawer that become broken or lost during the SEMESTER. THIS WILL BE STRICTLY ENFORCED.</p> <p>Failure to reconcile your account with the Bursar office will result in withholding of your CHEM 1115 grade.</p>								
<b>Lab Drawers</b>	Failure to check-out of your laboratory drawer before Finals Week will result in withholding of your CHEM 1115 grade.								
<b>Special Assignments</b>	Possible (stay tuned), but always with advanced notice								
<b>Extra Credit</b>	None								
<b>Grading (credit) Criteria</b>	<p><b>Summary of Points:</b></p> <table> <tr> <td><u>Each experiment:</u></td><td><u>Pts.</u></td></tr> <tr> <td>Workshops</td><td>10</td></tr> <tr> <td>Lab Write Ups</td><td>90</td></tr> <tr> <td>Total</td><td>100</td></tr> </table> <p><i>If there is a mistake on a lab grade, you have <u>one week</u> to change the grade.</i></p>	<u>Each experiment:</u>	<u>Pts.</u>	Workshops	10	Lab Write Ups	90	Total	100
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<b>Comet Creed</b>	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</p>								
<b>UT Dallas Syllabus Policies and Procedures</b>	<p><i>The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.</i></p> <p><i>Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.</i></p>								

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