Course Syllabus
CHEM 121L – General Chemistry 1 Laboratory
Fall 2014

1. Course Information
   Teaching Assistant:
   Email:
   Office Hours: CB 316A

   Head TA: Jade Horton
   Email: headTA.chem@gmail.com

1.1 Course Description
   This course provides the laboratory component to accompany CHEM 121A (General
   Chemistry I Lecture) in examining the fundamentals of chemistry including reaction
   stoichiometry, atomic structure, chemical bonding, molecular structure, states of matter,
   and thermochemistry. This class may be used (along with CHEM 121A) to satisfy the
   University's Core Natural Science A requirement. Please also note that this course has
   a $15 lab fee.

   Prerequisite: Completion of Core Curriculum Mathematics requirement (MATH 127R
   or higher recommended)
   Corequisites: MATH 127R and CHEM 121A

   **Please note that CHEM 121A is a co-requisite of CHEM 121L. If you are
   enrolled in CHEM 121A and CHEM 121L, and you drop either one, you should
   also drop the other. If you do not, you will be administratively removed from the
   other.

1.2 Core Objective 4: Physical & Natural Phenomena
   Students will be able to explain the processes by which the natural and physical world
   is investigated, articulate basic principles used to explain natural phenomena, and apply
   scientific processes to real problems using observational or experimental methods.

1.3 Student Learning Outcomes
   Throughout and upon completion of the course, students will take personal
   responsibility for their learning and academic success. The following are Student
   Learning Outcomes (SLOs), which every student may achieve by the completion of the
   course. Upon completion of this course,
   1. Students will be able to assess and determine the connection between the
      hands-on laboratory material and the material discussed in the lecture course
      (CHEM 121A).
   2. Students will be able to explain the relationship between the structure of a
      molecule and its chemical and physical properties.
3. Students will be able to apply knowledge and skill to laboratory techniques, including the proper and safe use and handling of glassware, the techniques and processes common to many scientific labs, standard methods for recording observations and data, performing accurate quantitative measurements.
4. Students will be able to analyze and interpret experimental results, derive chemical properties from experimental data, and develop appropriate and accurate conclusions.
5. Students will be able to articulate and follow ethical principles in the laboratory context.

1.4 Course Materials


→ **Goggles:** approved safety goggles are required. Goggles must make seal with face to provide splashing entering eye area. **Safety Glasses** are not approved for this course.

→ **Lab Coat:** a lab coat is also required for the experiments to be done.

1.5 Course Website: WebCampus

This course has a WebCampus page, to which you should have access as an enrolled student. The WebCampus page will be used to make announcements and to distribute course materials. You should check this site regularly for updates and information.

2. Course Evaluation

2.1 Laboratory Assignments

The report sheet and post-lab questions for each experiment are due at the beginning of lab the following week. They must be handed in before the pre-lab quizzes or they will be considered late and 25% of the earned points for that lab will be automatically deducted. If the lab report is not turned in at all during the lab period, 50% of the earned points will be deducted and the lab must be handed in the following lab period or the student will receive a zero for that experiment.

2.2 Point Distribution

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prelab Quizzes (10 pts each)</td>
<td>90 points</td>
</tr>
<tr>
<td>Lab Reports (30 pts each; Expt. #7 is 40 pts)</td>
<td>280 points</td>
</tr>
<tr>
<td>Final Exam</td>
<td>90 points</td>
</tr>
<tr>
<td>Performance Evaluation</td>
<td>40 points</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>500 points</strong></td>
</tr>
</tbody>
</table>

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There is no extra credit work available. All available points that are possible to earn are listed above.

2.3 Tentative Grading Scale

The following table shows the tentative grading scale for the lecture course.

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percent of Points Earned out of Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100 – 89 %</td>
</tr>
<tr>
<td>B+ to B–</td>
<td>88 – 79 %</td>
</tr>
<tr>
<td>C+ to C–</td>
<td>78 – 61 %</td>
</tr>
<tr>
<td>D+ to D–</td>
<td>60 – 50 %</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 50 %</td>
</tr>
</tbody>
</table>

2.4 ChemHelp Center

A chemistry specific tutoring center is available for you to seek lecture and laboratory help. It is located on the third floor of the chemistry building in room 316A. The hours and schedule can be found at [http://www.unr.edu/chemistry/chemistry-help-center](http://www.unr.edu/chemistry/chemistry-help-center). The staff will be available to assist with homework questions (MasteringChemistry), reviewing concepts, and working through practice problems provided weekly by your instructor. They will not do your homework for you. Using the ChemHelp Center early will greatly increase your chances of being successful in this course. No appointments are necessary; walk-ins only.

3. Laboratory Attendance, Safety, Behavior, and Attire

3.1 Laboratory Attendance

→ Laboratory attendance is mandatory. The TAs will record attendance for each lab period and report it to Dr. Martin.

→ If you miss the first lab period (check-in), your seat in that lab section will be forfeited and you must drop the course. If you do not drop the course, you will receive a “F” for your course grade.

→ There are no make-up labs. If you have an excused absence – one in which you have shown your TA or Dr. Martin valid, documentation – you will be given the chance to earn points on the lab report for the experiment you were absent. If you have an unexcused absence, you will receive a score of zero points on your lab report and participation grade for that lab period.

→ More than two missed lab periods will result in failure of the course. This is true for excused and unexcused absences alike. If you miss three lab periods, you will receive a “F” for your course grade.

3.2 Laboratory Safety
**All students are required to read the safety document titled “Laboratory Safety” on page 1 of the laboratory manual and take the safety quiz corresponding to this information. The quiz can be found on WebCampus and you must receive an 80% or better in order to pass the quiz. You are allowed two attempts; you will not be able to participate in lab if this quiz is incomplete. Your TA will provide more details at the first lab meeting.**

→ **The biggest safety concern that we have in lab is that any lab surface may be contaminated with chemicals. It is easy to pick up chemical contamination on your hands without even realizing it, and then something as simple as absent-mindedly rubbing your eye can result in excruciating pain and permanent damage to the eye. **Always wear goggles in the lab.** Besides protecting your eyes from broken glass or chemical splashes, wearing goggles also prevents absent minded eye rubbing. Make sure you wash your hands before taking off your goggles and before leaving the lab.  

→ **The second biggest safety concern that we have in our laboratories is broken glass.** Glass breaks every week. Small pieces may fly through the air (so always wear goggles) and large pieces fall downward. **So, always wear a lab coat and close-toed shoes to lab.** Sandals, clogs, and open-toe shoes are not allowed in lab. You will not be permitted to work in lab without goggles, a lab coat, and close-toed shoes, and you will receive a “zero” for that day’s experiment.  

→ **Long pants MUST be worn in lab. No exceptions.**  

→ **On the first day of lab, your TA will show you around the lab and point out various pieces of safety equipment, which include a safety shower, eyewash fountain, and fire extinguishers. Make sure you know the location of the nearest emergency exits. In the event of an accident, do not panic. Call your TA immediately for assistance. He or she will help you resolve the situation.**  

→ **Keep your work area uncluttered.** Your TA will tell you where to store backpacks and coats.  

→ **No eating or drinking is allowed in the laboratory at any time.** Never put anything in your mouth while in the lab.  

→ **Dispose of all chemical waste into the DESIGNATED WASTE CONTAINERS located in the fume hoods. NEVER pour any chemicals down the drain.** Your TA will describe which waste goes in which container during each lab session.  

→ **The General Chemistry stockroom is located in room DMS 404.** Any time you need a piece of equipment, you will get it from the stockroom. Make sure you sign your name on the checkout list when you check out the equipment and cross your name off the list when you return the equipment. Clean any borrowed equipment before you return it. You are financially responsible for any equipment checked out to you, including the equipment in your lab drawer.  

→ **If you drop the class after checking in to a drawer, you are required to check out your equipment drawer before the end of the semester. If you fail to check out on time, a hold will be placed on your registration.**

3.3 Laboratory Behavior
→ **Assigned safety questions must be turned in prior to starting to work in the laboratory** (see section 3.2 for information on where to find the safety questions). Any student not completing assigned safety questions before the first experiment will not be allowed to work in the laboratory, resulting in a score of “zero” for that day.

→ If you are **more than 20 minutes late** to lab, you will not be permitted in to the lab, and you will receive a “zero” for that day's work.

→ If you leave the lab early, without permission from your TA, you will receive a “zero” for the lab report for the experiment performed that day.

→ Do not leave the lab during the lab procedure for any reason unless you have permission from your TA.

→ **Do not enter the lab until your TA arrives.** This is a safety policy (see below).

→ **Disruptive and/or unsafe behavior will not be tolerated:** cell phones, smart phones, iPods, iPads, laptops, etc., should all be muted or turned off prior to entering class. Answering phone calls or other disruptive/unsafe behavior will result in removal from the classroom and possible dismissal from the course.

### 3.4 Laboratory Attire

→ **All persons in the laboratory shall wear goggles with impact and splash protection whenever any chemicals or experimental equipment are in use or on the benches anywhere in the laboratory.** Therefore, the goggles must not only be made from rigid plastic, but also make a splash proof seal with the skin on your face.

→ Students who are asked more than twice (in one lab period) to put their goggles on or follow any other safety procedure will be dismissed from the lab for that period. The student will not be allowed to make up that lab and will receive a "zero" for that experiment. **More than two "zeros" means failure of the course.**

→ Lab coats must also be worn for further protection.

→ Closed-toed shoes must be worn in the laboratory; open sandals or bare feet are forbidden in the laboratory. Shoes must cover the entire foot and be completely enclosed.

→ Pants must be worn when working in lab.

→ Individuals with long hair must tie it back to keep it away from fire, chemicals, and moving equipment.

→ Bracelets, necklaces, neckties, and similar loose items of attire may create a hazardous situation and so they must be confined or not worn in the laboratory.

→ **Students will not be allowed to enter the laboratory if not properly clothed and will receive a "zero" for that day's experiment and will not be allowed to make it up.**

### 4. Email Etiquette

Emails sent to any university employee (the course Instructor **OR** the lab TA) should be written as and thought of as a professional (business) email. Therefore, the following guidelines should be followed:
1. Include the course information in the subject line (e.g. “CHEM 121L”).
2. Include a salutation (e.g. Dr., Prof., Mr., Ms., Mrs., etc.).
3. Write complete sentences.
4. Do not use “texting English.”
5. Put a blank line between paragraphs.
6. Conclude the email with your first and last name.
7. Do not include your NSHE ID number or your Social Security number. (State university emails are public domain. The TA or I can look up your NSHE ID number on a secure website if needed.)
8. Do not ask how to answer a question on the lab report. (The TAs and I will answer any questions you have regarding chemistry in person. Therefore, come to office hours or email the TAs or I to setup an appointment.)
9. Do not ask about your course grade. Due to the federal law, the Family Educational Rights and Privacy Act (FERPA) of the U.S. Congress, neither the TAs nor I can comment on, communicate, or acknowledge your grade via email or telephone. (This is to protect your privacy as a student and an adult.)
10. Do not send an email asking about information unless you have already exhausted all possibilities in your search.
11. Use the same format (salutation, complete sentences, concluding with your name) listed above for all replies.
12. Please be patient; do not expect an immediate response. Allow 24 hours for a response to your email.

5. University Policies

5.1 Academic Dishonesty

Your continued enrollment in the course implies that you have read and are familiar with the Student Code of Conduct and Policies of the University Nevada, Reno. The following definitions and possible courses of action concerning academic dishonesty are taken from Section 8.3 of the University Catalog and can be found online at: http://catalog.unr.edu/

Academic dishonesty is against university as well as the system community standards. Academic dishonesty is defined as: cheating, plagiarism or otherwise obtaining grades under false pretenses. Plagiarism is defined as submitting the language, ideas, thoughts or work of another as one's own; or assisting in the act of plagiarism by allowing one's work to be used in this fashion. Cheating is defined as (1) obtaining or providing unauthorized information during an examination through verbal, visual or unauthorized use of books, notes, text and other materials; (2) obtaining or providing information concerning all or part of an examination prior to that examination; (3) taking an examination for another student, or arranging for another person to take an exam in one's place; (4) altering or changing test answers after submittal for grading, grades after grades have been awarded, or other academic records once these are official.

Any form of academic dishonesty will not be tolerated in this class. Disciplinary procedures for incidents of academic dishonesty may involve both academic action and
administrative action for behavior against the campus regulations for student conduct. The minimum penalty for academic dishonesty is an F in the course. A student found responsible for violating this policy may not withdraw from the course in question. A student failed in a course due to academic dishonesty may not utilize the “repeat option” for that course. See The Student Handbook and UNR Catalog for rules about and sanctions for academic dishonesty.

5.2 Students with Disabilities Act

The Department of Chemistry and the University of Nevada, Reno support providing equal access for students with disabilities. Any student with a disability needing academic adjustments or accommodations is requested to speak with me or the Disability Resource Center as soon as possible to arrange for appropriate accommodations. The contact information for the Disability Resource Center is:

Disability Resource Center
Thompson Building, Suite 100.
Phone: 775-784-6000
Website: http://www.unr.edu/drc

5.3 Academic Success Services

Your student fees cover usage of the Math Center (784-4433 or http://www.unr.edu/mathcenter/), Tutoring Center (784-6801 or http://www.unr.edu/tutoring-center/), and University Writing Center (784-6030 or http://www.unr.edu/writing-center/). These centers support your classroom learning; it is your responsibility to take advantage of their services.

Additionally, your student fees cover usage of the Suppelmantal Instruction (SI) program on the UNR campus. The SI website is: http://www.unr.edu/tutoring-center/types-of-tutoring/supplemental-instruction

A SI Leader will be present in all lectures and will hold multiple sessions a week to help students with the material covered in lecture.

Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

5.4 Surreptitious and Covert Video and Audio Recording

Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.
6. Laboratory Schedule for CHEM 121L - Fall 2013

**IMPORTANT:**

→ Safety Quiz must be completed and passed with a minimum of 80% prior to the first experiment!! (See section 3.2 for web address of Safety Quiz.)

→ If you miss the first lab period (check-in), your spot in that lab section may be forfeited and you may be asked to drop the course. If you do not drop the course, you will receive a “F” for your course grade.

→ Print the schedule for your lab days from the CHEM 121L WebCampus course site.

→ Check the CHEM 121L WebCampus course site for lab updates at least 24 hours prior to your lab each week. You are expected to prepare for each laboratory meeting by reading the assigned experiment carefully and reviewing the relevant sections in your lecture notes and textbook.