Chemistry 121: College Chemistry Laboratory I - Fall 2008

I. Chem 121 Coordinator: Dr. L. Pesterfield  
Office: 422 TCCW  
Email: lester.pesterfield@wku.edu


III. Enrollment Requirements:  
Current enrollment in Chemistry 120 or previous credit for Chemistry 120.

IV. Students must supply a pair of safety goggles. Safety glasses will not be accepted.  
Students may also want to bring a roll of paper towels and a small bottle of soap.

V. Grade Evaluation:  
A. 8 lab reports @ 55 pts. 440 pts. [prelab 5pts., summary 5pts., report 45pts.]  
2 exams @ 80 pts. 160 pts.  
600 pts. Total possible points

B. Grades are based on the total number of points earned on the lab reports and exams.  
There is NO extra credit.  
≥540 90.0 % A  
≥480 80.0 % B  
≥420 70.0 % C  
≥300 50.0 % D  
<300 F

C. Exam I (Week of Oct 13 - 17)  
Safety, Unknown Liquid, Oxide of Copper and Graphs  
Exam II (Week of Dec 1 - 5)  
Chem Changes, Gas Laws, Calorimetry and Ferrofluid

D. Upon entering lab, students must submit to the lab instructor a hand-written summary of the lab procedure (including the setup for any calculations) for the day’s activity. The lab instructor will approve the summary (initial and date) and return to the student for use during the lab activity. If the summary is not approved, a student will NOT be allowed to start the lab activity of the day until they have completed a summary. (NO extra time will be given to students who do not have summaries approved at the beginning of lab.) The procedure summary is to be in the student’s own words and hand writing (NO typed or xeroxed copies will be accepted.) Students will not be allowed to use their lab books for the procedure during lab only their hand-written summaries. An example summary will be provided as a guide.

E. Prelabs for the current day’s activity and the lab report for the previous lab’s activity are due at the beginning of the laboratory period. NO late work will be accepted.
VI. Safety considerations
A. Sandals and open-toed shoes are NOT allowed in lab. Students wearing sandals or open-toed shoes will NOT be allowed to participate in lab until they obtain the appropriate footwear.

B. NO consumable products (food, bottled water, sodas, gum, etc.) are permitted in lab. Please finish (or put away) all consumables before entering lab.

C. Safety Goggle Policy: Students must wear their safety goggles during lab. The following penalties will be strictly enforced for failure to wear safety goggles during lab.
   - first offense per lab period: warning
   - second offense per lab period: ½ of lab grade for day
   - third offense per lab period: zero for all work submitted for day

VII. Attendance/Makeup Policy
Students must complete all experiments. Completing an experiment is defined as attending the scheduled lab period, performing the assigned activities, submitting the prelab exercises and summary sheet at the beginning of the laboratory period and submitting a lab report sheet for the activity at the beginning of the next laboratory period.

If you must miss a lab period, you must make arrangements with Dr. Pesterfield a minimum of one week in advance. All make-up must be completed during the same week that they are scheduled in the syllabus. You are allowed to make-up only one experiment during the semester. Any exceptions must be approved by Dr. Pesterfield.

Failure to complete one experiment will result in the final grade being lowered by one letter grade. Failure to complete more than one experiment will result in a failing grade for the course.

VIII. Academic Dishonesty and Cheating
"Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act was detected or a failing grade in a course without the possibility of withdrawal. The faculty member may also present the case to the Office of the Dean of Student Life for disciplinary sanctions."

"To represent written work taken from another source as one's own work is plagiarism. Plagiarism is a serious offense. The academic work of a student must be his/her own."

"Students should not receive or give assistance unless authorized by the instructor while taking an examination or during the preparation of an essay, laboratory report, problem assignment or other project which is submitted for the purposes of grade determination."

*WKU Catalog Issue 2005-2007, page 26*
IX. Special Accommodations
In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center.
Please DO NOT request accommodations directly from the professor without a letter of accommodation from the Office for Student Disability Services.

X. General Education Statement
Through a series of laboratory activities, students will be exposed to fundamental concepts in chemistry and learn how to perform basic laboratory manipulations. Student will learn proper techniques for handling solid, liquid and gas samples and the use of basic laboratory equipment, e.g. pipets, burets, balances, filtration flasks and Bunsen burners. Individual laboratory activities emphasize the concepts of making and recording observations and data, stoichiometry, gas laws, neutralization, VSEPR theory and calorimetry. All course assignments are intended to help you improve both your laboratory and problem solving skills.
<table>
<thead>
<tr>
<th>Week of</th>
<th>Activities</th>
<th>Points</th>
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<tbody>
<tr>
<td>Aug 25 - 29</td>
<td>Safety and syllabus</td>
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<td>Sept 1 - 5</td>
<td>NO LAB (Labor Day)</td>
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<td>Sept 8 - 12</td>
<td>Identification of an Unknown Liquid</td>
<td>55</td>
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<td>Sept 15 - 19</td>
<td>Reduction of an Oxide of Copper</td>
<td>55</td>
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<td>Sept 22 - 26</td>
<td>Preparing Graphs</td>
<td>55</td>
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<td>Sept 29 - Oct 3</td>
<td>NO LAB (Fall Break)</td>
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<td>Oct 6 - 10</td>
<td>Molecular, ionic, net-ionic equations lecture</td>
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<td></td>
<td>Students must complete all ionic and net-ionic equations in lab and submit the lab report to TA.</td>
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<td>Oct 13 - 17</td>
<td>Lab Exam I</td>
<td>80</td>
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<td>Oct 20 - 24</td>
<td>Chemical Changes</td>
<td>55</td>
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<td>Oct 27 - 31</td>
<td>Gas Laws</td>
<td>55</td>
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<td>Nov 3 - 7</td>
<td>NO LAB (Election Day)</td>
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<td>Nov 10 - 14</td>
<td>Calorimetry</td>
<td>55</td>
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<td>Nov 17 - 21</td>
<td>Synthesis of a Ferrofluid*</td>
<td>55</td>
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<td>Nov 24 - 28</td>
<td>NO LAB (Thanksgiving)</td>
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<td>Dec 1 - 5</td>
<td>Covalent Molecules**</td>
<td>55</td>
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<td></td>
<td>Clean-up</td>
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<td></td>
<td>Lab Exam II</td>
<td>80</td>
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☺ Assignments/Lab reports are due at the beginning of each lab period.
☺ Appropriate units must accompany each measured or calculated value. The penalty is 2 points for each missing unit.
☺ You must clearly show how you obtained answers to problems and experimental results. If work is absent or not logically presented, then no credit will be given.

☻ Synthesis of a Ferrofluid*: This laboratory activity is not included in your laboratory text but will be supplied by the instructor.

☻ Covalent Molecules**: This lab is a homework lab to be completed before students come to lab for the second lab exam.