CHEMISTRY 1B Lab & Seminar
Continuation of Chem 1B Greensheet

Fall 2015

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BOOKS/SUPPLIES/COURSES

Required
1) Lab Manual/Handouts for Chemistry 1B - Sold during the first 2 weeks of school by the Chemistry Student Club (DH20- basement) - They only take cash!
2) Hand-held scientific calculator - Must be non-programmable and should have log x, $10^x$, ln x, $e^x$ and $x^y$ keys. - You will not be allowed to use your programmable calculator during a lab exam or quiz!

Not Required (But useful)
1) Academic Excellence Workshops to help you study for Chem. 1B. These are 3 hour a week organized study sessions. I will provide more information on how to enroll and the times.
2) Suggested items to purchase for lab: small notebook to keep in your drawer (you can staple together 15 sheets of lined paper?), safety glasses and a china marker (sold at bookstore). The note book is to keep a set of data in your locker in case you lose your lab manual. The safety glasses are in case you don’t want to use the goggles provided in your locker and the china marker writes on glass to label things quickly. Note though the china marker will not label things that go in the oven!

THINGS YOU MUST DO THIS FIRST WEEK OF CLASS
1) Attend your lab section to claim your space. Miss your first lab, we drop you from the course!
2) Attend seminar on the first week of school.
3) Read this greensheet thoroughly. It is the rules of the game. Best to know the rules before you start.
4) If you purchased the manual, read pages i – xii of the lab manual before attending your lab session. If not, go to the yahoo group or SJSU Chem Dep website and read the safety rules for teaching labs.
5) If you decide to drop the course, please give Dr. Singmaster a note with your name indicating that you will be dropping the course. It will allow us to add people efficiently.
6) Do the calculator practice in your lab manual. It is your responsibility to know how to use your calculator. Instructors will not assist you during an exam or quiz!
7) Start working on Exp. 13 problems on concentration and stoichiometry.

ATTENDANCE/WORKLOAD

Regular attendance to lab are required. Absences to lab can and will result in an F grade for the FULL course (two unexcused absences from lab are sufficient for me to drop or fail you!!). Please remember this is a 5 unit course, it will require a great deal of your time. Seldom does a student who works and carries a full course load succeed in this class. Make arrangements now, don’t wait until you are behind. The university guidelines are two hours of study time per unit per week.
To attend another lab section so as to complete work, you will need the consent of the section's lab instructor. They are not required to accept you in their lab, particularly if their lab is full! I strongly encourage you to not be absent from lab.

MISCONDUCT

Students are to do only those laboratory experiments assigned. Certain chemicals when improperly used are very dangerous. You are responsible for disposing chemical wastes safely; the lab instructor will inform you on particular waste disposal issues for each experiment. If they forget to inform you, ASK THEM!! Any student found preparing anything that may in any way endanger her/his safety or the safety of others will be immediately dropped from the course with an F grade. Any student found disposing of wastes incorrectly is also in danger of being dropped from the course or failed. Students are expected to behave maturely and honorably in the lab and lecture course.

While taking exams or quizzes, the student should keep his/her eyes down on his/her own paper. No whispering or talking is allowed. You are not allowed to share a calculator or periodic table during exams or quizzes. If your calculator fails inform the instructor. They can then decide a course of action. You may not use your cell phone or PDA as a calculator; these should be stored in your backpack or on the floor beneath your seat. You may not answer the phone during a test. You cannot have headphones/earphones in your ears irrelevant of what you are listening to. All printed or written material (notebooks, textbooks, etc.) should be placed under the seat, left outside the room or placed near the lecturer's table, at the front of the room. Failure to comply will cause the instructor to pick up the exam and give a grade of F for the exam and/or course. Willful solicitation, procurement or conveyance of exams/quizzes/unknowns will also result in failure of the course. The instructor can and will bring the person caught cheating to the attention of the university committee in charge of student misconduct.

EMERGENCIES/EVACUATIONS

If you hear a continuously sounding alarm, or are told to evacuate by Emergency Coordinators (colored badge identities), walk quickly to the nearest stairway (end of each hall). Take your personal belongings with you as you may not be immediately allowed to return. Follow instructions of Coordinators. Be quiet so you can hear. Once outside, move away from the building. Do not return to the building unless the Police or Coordinators announce that it is permissible. If an alarm should occur during an exam or quiz, please attempt to give your instructor the paper.

MISCELLANEOUS

1) You must bring the lab manual to each lab class and seminar; however you do not need to bring the textbook to lab or seminar, unless you want to.

2) Safety glasses must be worn at all times during the lab experiments; if they fog up, take them off outside the room!! SJSU provides you with goggles in your lab drawer but you might consider buying your own at the bookstore.

3) Keep track of your scores. At the end of the semester compare your grade sheet with the lecturer and lab instructor's grade sheets to make sure we have transcribed and adjusted you grades correctly. You have only 9 days from the day a quiz or exam is returned to ask for a regrade of your exam or quiz. I will not do regrades after nine days have passed.

4) If a fire alarm were to interrupt an exam please do the following: Leave the room via the door closest to the instructor and give the instructor your quiz or exam. Provide assistance to any disabled students. Take your books with you since there is some chance you might need to go to your next class before you are allowed in the room.

5) Please remember that you must check out of the lab even if you drop the course. A $25 charge will be billed to you if you do not check out.
6) Any student with a disability requiring special testing conditions must show the necessary documentation from the university to the instructor within the first two weeks of class.

7) A student has two weeks to determine whether they wish to remain in the course. Students dropping after those two weeks will be charged a $25 fee to help defray the costs incurred in lab and for the fact that we can't replace them with an add. All students dropping the course are strongly encouraged to let Dr. Singmaster know in writing of their intent to drop.

8) It might be useful to purchase a small, inexpensive bound notebook to keep in your lab locker. You can keep a second copy of your raw data for each experiment in that notebook. (First copy of data goes on the data section of an experiment in your lab manual.) That way, if you lose you lab manual or misplace the data, you have a safe copy in your drawer and you do not need to start the experiment over. All you need to copy is the raw data, you can always redo the calculations. Some labs take two periods and would require you redoing everything to get a final result.

9) You get your own two lockers in Chem. 1B. You do not share these. Once you check in you are financially responsible for any breakage or loss. More details in lab.

10) We have been having issues with students checking out certain equipment and not returning it in a timely manner for other students to use. There will be a late charge of $5.00 to all Chemistry 1B students who do not return limited resource items at the end of the lab period. Subsequently students will be charged $5.00 for each additional day (not including weekends and Holidays) they fail to return these items to the Service Center. Past the initial late fee charge of $5.00, students will not be required to pay a late fee greater than the replacement cost of that item. Late Charges for Chemistry 1B students are for the following limited resource items: Liquid and Gas Burets, Volumetric Pipets and Bulbs, Volumetric Flasks, Conical Flasks (except 500 ml), Graduated Cylinders, Centrifuge Tubes, Funnels, Aluminum Spiral, Stopwatches, Digital Thermometers, and Volt Meters.

Laboratory

It is your responsibility to complete the experiment on time, particularly if you don’t come prepared! Chem. 1B experiments often take more than one lab period and require that you come to class with a clear idea of what you have to do and in what order. Also they often require that you process more than one run at a time or you won’t have enough lab time to complete the experiment. You must pay attention to the lab instructor when they say “Start cleaning up”. This will usually be said 15 minutes before the end of lab. There will be times when the instructor might say that you cannot start X part of the experiment because there isn’t enough time to complete it. Follow those instructions or you will damage experimental runs and you will get to start over!

Credit for doing a lab comes from attending the lab, physically doing the lab and then handing in the necessary reports/worksheets. These report sheets get graded for accuracy and precision. This counts for as much as 60% of your grade on your report sheet. Thus doing the experiment will not get you through the course. You have to do it WELL. Without the reports, you will not get any credit for the lab. If you hand in a report without having attended the lab, you will be dropped from the course and reported to the University’s Disciplinary Committee. Some of the labs are done in groups. Members of the group are expected to be physically involved in doing the experiment and collecting the data. If one student does all the work, the partner will not get credit, even if the partner hands in a report sheet!

Extra time in lab will be used to either work out data and the report sheet, or to practice doing problems. You have an instructor in the room who can help you study! Don’t waste the opportunity.

Please do not be absent from lab! Two unexcused absences are sufficient for us to fail you in the full course. To make up an absence it is possible to attend another lab section. However, if the lab is full the instructor can deny you access (most will be full!!). Request a make-up slip. Follow the instructions on the slip. You only have the privilege of one make-up. After that you need to consult Dr.
Singmaster.

Friday Seminar
This is when we discuss the following week’s lab, do the lab quizzes and lab exams. Attendance is required, is not optional. We also discuss the calculations. This will not be done in lab! This is also when we give the lab quizzes. You can take a quiz early but we do not do make-up quizzes.

Lockers
You will not be sharing lockers with a student from another lab section. To check out equipment you will be using a checkbook. It is important that you follow the instructions on how to use the checkbook. They will be provided to you in the lab manual. Equipment checked out with a check that is not returned at the end of the semester will be billed to your SJSU account.

Grading
The total lab grade constitutes 40% of the final grade. Failing lab (55.0% or less) or lack of attendance to lab will result in an F grade for the FULL COURSE, irrelevant of how well you are doing in lecture. Do not miss labs!! PLEASE note we do NOT provide extra credit work at the end of the semester for students who are doing poorly.

The grade for lab is forwarded to your lecture professor. He/She will combine that with your lecture grade to give a grade for the full course. The grading is based on quizzes, lab exams, lab reports and evaluations points. These points do not have the same weight! Quiz and lab exam point weigh more than lab report points!

Quizzes
We expect that you will have about nine 10-point lab quizzes (possibly a tenth because I am considering a greensheet quiz also). We will delete the ONE lowest quiz score to calculate your total quiz score. You must get 80% or better in the safety quiz to remain enrolled in the course. You will have a maximum of two chances to pass the safety quiz. If you fail the safety quiz the first time, you will have to either visit your lab instructor or Dr. Singmaster to get a make-up chance.

Lab Reports/Unknowns
Typically you must submit a lab report at the end of every experiment. Many of these experiments have unknowns. Point value for the reports varies greatly depending on the nature of the experiment. Exp. 16, 19 and 23 are quantitative analysis of a sample. As such they are the reports that are worth the most points. Exp. 24 and 25 are “lab practicals” and also count for a lot of points. We will be provided with a goal to accomplish and you will have to write the procedure and test it out. More details to be provided below and in lecture. These experiments will count for a significant number of points. Quantitative analysis unknowns in Chem. 1B require that you report the amount of material present. You are graded for both precision and accuracy. To obtain a perfect score for an unknown your result must have the proper units, the correct number of significant figures and, typically, must be less than a 1% off from the correct value. In addition the range of your data runs must be small (less than 1% of your value). This might seem like a strict grading scheme but for 90% of the students the scores on the unknowns are higher than for their lab exams and quizzes, thus unknowns typically raise your grade. The scores also reflect your ability to perform scientific procedures in a meticulous manner. If an experimental run is damaged, it is your responsibility to repeat it. You will need to discuss with your lab instructor whether you have the time to complete it in class or whether you need to attend another lab. Report sheets have due dates that are listed at the end of this greensheet. You are strongly encouraged to hand in the report sheets well before the due date and prior to the quiz on the experiment so that you can ascertain whether
you are doing the work correctly! Report sheets handed in after the due date will have points deducted from the score at a rate of 20% per week late! This hopefully forces students to keep up with the work load and minimizes last minute grading by the lab instructors.

Exams

Two 100-point exams will be given during the activity time on Friday. The exam dates are included on the schedule. The lab exams often have more of the calculations portion of the course, whereas the lecture exams often have a larger theory component. You can request to take an exam early but we do not do lab exam make-ups.

Evaluation points

Your lab instructor will assign evaluation points to each student at the end of the semester. Every student in their lab will get 7 out of 10 points initially (an average grade). Student who demonstrate involvement in the course by assisting classmates, helping with waste bottles, overall just being very good lab citizens will go up in points and those who are late, in a hurry to leave lab, rude to classmates and/or the instructor, will go down in points. Overall the average grade for the lab must remain at 7 out of 10 points (C level).

Lab Practicals

Experiment 24 is to prepare a solution with certain assorted concentrations and then test your solution to see if you prepared it correctly. This will require a solid understanding of significant figures, units, molarity, dilution, use of pipets, balance(s) and volumetric flasks. You get to write a procedure and then follow it. You test your solution and decide whether you are satisfied with your result or not. You then get a second chance to adapt your procedure and prepare a new solution. Exp. 25 will consist of preparing a buffer and testing to see whether you have done so correctly. An understanding of acid-base equilibria and stoichiometry will also be needed to complete this task. Again you will have the chance to test your procedure. Your written procedure as well as your result will be graded. Plagiarism will not be tolerated. If you do not know what plagiarism means come see me!

Total Lab score is made up by 35% lab exams, 30% lab quizzes, 30% lab reports and 5% evaluation points. You must complete the lab with a 55% or you will fail the FULL course irrelevant of how well you did in lecture!

Due Dates of Report Sheets – You can hand in earlier!
Cautionary note – Dr. S strongly encourages you to not leave Exp. 23 for the last minute!

9/1 – 3 Exp. 13 Due at the start of lab to your lab instructor
9/9 – 11 Exp. 15 Due at the start of lab to your lab instructor
10/2 Exp. 16 Due in Friday seminar to Ms. Serrano (attach calculations
ONLY if you instructor wants them attached)
10/6 – 8 Exp. 17 Due at the start of lab to your lab instructor
10/13 – 15 Exp. 19 Due at the start of lab to your lab instructor
10/20 – 22 Exp. 18 Due at the start of lab to your lab instructor
11/3 – 5  Exp. 20  Due at the start of lab to your lab instructor
11/10 – 12 Exp. 21  Due at the start of lab to your lab instructor
12/1 – 3  Exp. 22  Due at the start of lab to your lab instructor
11/30  Exp. 23 (but earlier OK)  **Due to Dr. Singmaster (DH 16 door slot)**

Exp. 24 and 25 are due by the LAST lab meeting to your lab instructor. Early is better though, if you have it done!

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**Chem 1B - Fall 2015 - Lab Schedule - Dr. Singmaster**

*Accessible version of calendar.*

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Lab</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>0</td>
<td>8/20/2015</td>
<td>Check-in</td>
<td>Attendance Required!</td>
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<tr>
<td>1</td>
<td>8/24 - 8/28</td>
<td>Check-in, Exp 13</td>
<td>Safety Quiz, Discuss Exp. 15/16</td>
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<td>2</td>
<td>8/31 - 9/4</td>
<td>Exp 15, NaOH for Exp 16</td>
<td>Quiz Exp 13, Discuss 16</td>
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<td>3</td>
<td>9/8 - 9/11</td>
<td>Exp 16</td>
<td>Discuss 23</td>
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<td>9/14 - 9/18</td>
<td>Exp 16/23</td>
<td>Discuss 17</td>
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<td>9/21 - 9/25</td>
<td>Exp 17</td>
<td>Quiz Exp 16, Discuss 19</td>
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<td>6</td>
<td>9/28 - 10/2</td>
<td>Exp 19</td>
<td>Quiz Exp 17, Discuss 18</td>
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<td>7</td>
<td>10/5 - 10/9</td>
<td>Exp 18</td>
<td>Quiz Exp 19, Discuss 20</td>
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<td>10/12 - 10/16</td>
<td>Exp 23</td>
<td>Lab Exam I</td>
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<td>10/19 - 10/23</td>
<td>Exp 20</td>
<td>Quiz Exp 18, Discuss 21</td>
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<td>10/26 - 10/30</td>
<td>Exp 21</td>
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<td>11/2 - 11/6</td>
<td>Exp 24</td>
<td>Quiz Exp 20, Discuss 25</td>
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<td>11/9 - 11/13</td>
<td>Exp 24/25</td>
<td>Quiz Exp 21, Discuss 22</td>
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<td>13</td>
<td>11/16 - 11/20</td>
<td>Exp 22/24/25</td>
<td>Q and A</td>
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<td>15</td>
<td>11/30 - 12/4</td>
<td>Exp 25, Check out(WTh labs)</td>
<td>Lab Exam II</td>
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<td>16</td>
<td>8-Dec</td>
<td>Check out (T lab only)</td>
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<td>24 Check in, 13</td>
<td>15, NaOH</td>
<td>26 Check in, 13</td>
<td>27 13</td>
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<td>31 Labor Day</td>
<td>1 15, NaOH</td>
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<td>DEC 7</td>
<td>8 Check out</td>
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Lab Exam I – Exp. 13, 15, 16, 17 and 19  Lab Exam II – Exp. 18, 20, 21, 22 and 23

Students can redo a lab on their own time as long as the needed equipment is in the room AND there is extra space in the lab section, if they are attending a lab others than their own. Highest possible grade on a redo is 10% lower than the original value of the experiment. Report sheets have a penalty of 20% off for every week late.