

Chemistry 229

General Chemistry Lab 3

Spring 2011

Lab Coordinators:

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General Chemistry Laboratory SYLLABUS – Spring 2011

Lab Packet: All printed material for this lab will be available on Blackboard **OR** may be purchased at Smart Copy (1915 SW 6th Avenue).

Prelab Exercises: Prelab instructions are included in the lab packet. You should answer any questions presented and prepare for the weeks lab before your lab meeting. Pre-labs are due at the **beginning** of the lab period.

Materials: You will need chemical splash safety goggles. These are available from the stockroom (\$6.50) or the bookstore. You will need a bound carbonless copy notebook (not loose paper) for recording data. If you are continuing on from Chem 228 you may use the same lab notebook for the entire general chemistry lab series. *You are responsible for all laboratory equipment checked out to you.* If you break glassware, you will pay the cost of the glassware, as listed on the equipment check in sheet.

Dress for lab: You must wear shoes that cover your entire foot, including the heel. They should fit up near your ankle; leather is preferred but any non-porous material is okay. Short shorts and short skirts are not allowed. Your clothing must cover your torso and legs down to your knees.

Grading: The laboratory is graded on a Pass/No Pass basis. An average of 75% of all points available in the lab is required to pass.

Laboratory reports are due at the beginning of the lab period following completion of the experiment. Lab reports should be typed. Late reports will be docked 5 points per day late.

Attendance: Attendance in this lab is mandatory.

YOU MUST ATTEND ALL SCHEDULED LABORATORY MEETINGS. If you are not able to attend lab you must notify your laboratory instructor as soon as possible. For a missed lab meeting you **must** make up the missed lab time during the make-up. The make-up laboratory will take place during week 10 of the quarter, during the regularly scheduled lab period. *In addition to completing the make up lab, students are responsible for completing the lab report for the missed lab.* Data can be obtained from a lab partner or the lab instructor. The made up work should be clearly labeled and indicate the origin of the data reported. Reports are due the week following the syllabus deadline, unless other arrangements are made with the lab instructor. **FAILURE TO DO BOTH WILL RESULT IN A NO PASS GRADE.** If you miss two or more labs your grade will be a NO PASS.

NOTE: If you are more than 15 minutes late to lab you will be marked late. Two late arrivals during the term will be counted as a missed lab. In addition, late students may be assigned to lab clean up duties at the conclusion of the lab period. If you are chronically late you will be given a NO PASS.

Week 1

Check-in. Announcements and registration adjustments.

Week 2

Lab 1: Acid Rain

Week 3

Lab 2: Acid Dissociation Constant

Acid Rain Report Due

Week 4

Lab 3: Titration of a Diprotic Acid: Identifying an Unknown (**complete report**)

Acid Dissociation Constant Report Due

Week 5

Lab 4: Buffers

Titration of a Diprotic Acid: Identifying an Unknown Report Due

Week 6

Lab 5: Determining a Solubility Product (**complete report**)

How Buffers Report Due

Week 7

Lab 6: Voltaic Cells

Determining a Solubility Product Report Due

Week 8

Lab 7: Redox Titration: Analysis of a Commercial Bleach

Voltaic Cells Report Due

Week 9

Lab 8: Establishing a table of Reduction Potentials (**Monday Labs Do Not Meet Week 10. It is necessary that you check out of your lab drawer before leaving lab. If you need to do the make-up lab, you will also need to make arrangements to do the make up lab in another section.**)

Redox Titration Report Due

Week 10

Check-out. Make-up lab. (**Monday Labs Do Not Meet This Week. Reports will need to be turned in by the assigned day and time**)

Establishing a Table of Reduction Potentials Worksheet Due

Experiments will be done in with groups of three sharing the computer for data analysis and acquisition. **Lab reports MUST be written individually.**

Late Work: Reports are due at the **beginning** of the indicated laboratory period. Reports will be docked 5 points for each calendar day they are late.

Grading Criteria

**Every lab (except lab 3 and lab 5) is worth 50 points (including the prelab)
Each lab report will be graded according to the following point distribution:**

Prelab: 5 points

Abstract: 10 points

Data: 10 points

Results: 15 points

Discussion: 10 points

Be sure to read the Report Guidelines in this manual. A sample lab report is provided.

**Lab 3 and Lab 5 will require more complete write-ups and will be worth 75 points
These lab reports will be graded according to the following point distribution:**

Prelab: 5 points

Abstract: 10 points

Introduction: 10 points

Procedure: 10 points

Data: 10 points

Results: 15 points

Discussion: 10 points

Conclusion: 5 points

**In addition to the above points each lab meeting will have an additional 10 points assigned
on the following basis:**

Notebook: 5 points

Lab technique: 5 points

Be sure to read "Keeping a Lab Notebook". Both of these criteria will be evaluated by your TA during each lab meeting. **At the end of each lab you must check out with your TA so that he or she can assess your lab notebook and verify that you have cleaned your work area.**

Points assigned to lab technique are assigned by the TA. The basis for assigning these points includes (but is not limited to) general lab technique and methods, safety, general mannerism in lab and cleaning up after yourself.

Labs are graded on a Pass/No Pass basis.

In order to pass the lab you must turn in every lab report.

More than one absence will result in a No Pass for the class.

You must receive 75% or greater of all the points available to pass.