

**GENERAL CHEMISTRY 111—Laboratory**

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The labs for Chem 111 are meant to introduce you to aspects of chemical laboratory procedures and techniques that are necessary for success in later chemistry courses. These include synthesis and characterization of products, analysis of chemical mixtures, design of chemical experiments, and the use of chemical observations to determine chemical composition. In most experiments, students will work individually. You are welcome to consult with your friends and neighbors, as well as with the teaching assistant and instructor, but please remember that your grade ultimately depends on your own work.

Please note the following reminders concerning lab safety. **Unsafe behavior in Lab will not be tolerated. Repeated unsafe behavior will result in a zero for that lab.**

As a student chemist, you will be working in many situations that demand your utmost care and attention to protect the safety and health of yourself, your fellow students, and the environment. Preparation and careful, patient work are needed to obtain the results required in each experiment. Some guidelines for safe and productive completion of this lab are as follows:

- Safety glasses must be worn at all times
- No eating, drinking, or tobacco use
- No horseplay
- No unauthorized, "independent" experiments
- No sandals (enclosed shoes only)
- No shorts (long pants only)
- All accidents and injuries must be reported immediately.
- You should know the location of all exits and emergency equipment (fire extinguishers, fire blanket, eye wash, showers, etc.)
- If you are unsure if you are performing a technique safely, please ask first.
- ***Wearing contact lenses in lab is highly discouraged.*** If you do wear them in lab, you MUST inform the lab instructor and you MUST wear a full goggle.
- You should wear older clothes - they could be stained or ruined.
- Use common sense and your intuition—if it seems dangerous, ask first!

Your Lab Notebook should be neat, well organized, up-to-date and complete, with a Table of Contents. Leave room to record your data, the uncertainties in measurements, and any observations about the experiment. Use a different notebook page for each day's data, and submit the carbon at the end of the lab period.

Lab reports consist of the already submitted carbon copies of your notebook pages, the appropriate report form, sample calculations, and answers to any questions. They are due one week following completion of the experiment. Additional instructions will be given in the prelab lectures. Lab reports are due at the beginning of the lab as shown on the schedule below - any changes will be announced in lab. **Late labs will be penalized 10% plus 1 point per day late (weekends count as one day) and can be turned in for credit no later than two weeks from the original experiment date.** Prelabs are due at the start of lab, and will not be accepted late.

Only absences where the instructor is notified ahead of time will be excused and a make-up permitted. All requests to make up a lab or attend a section other than your normal lab must go through me. Lab make-ups must be scheduled by the end of the week that the lab is missed and must be completed by the end of the following week. Students who simply show up at a different lab section will not be admitted to that lab.

**TENTATIVE LABORATORY SCHEDULE**  
**General Chemistry 111, Lycoming College, Spring 2008**

<b>Week of</b>	<b>Experiment</b>	<b>What's Due</b>
Jan. 7	Check in; Safety; Exp 1, <b>Precision and Accuracy</b>	Lab Deposit, get key
Jan. 14	Exp 2 <b>Calibration of Volumetric Glassware</b>	TOA and Accuracy/Precision lab report; Small, empty, labeled Erlenmeyer flask
Jan. 21	Exp 3 <b>Gravimetric Analysis of Ni<sup>+2</sup></b>	TOA and Calibration lab report; labeled test tube
Jan. 28	Exp 3 <b>Gravimetric Analysis of Ni<sup>+2</sup></b>	
Feb. 4	Exp 4 <b>Qualitative Analysis of Cations</b>	TOA and Gravimetric lab report
Feb. 11	Exp 4 <b>Qualitative Analysis of Cations</b>	
Feb. 18	Exp 5 <b>Synthesis and Characterization of a Cobalt(III) Complex</b>	TOA
Feb. 25	'SPRING' BREAK – NO LABS	
Mar. 3	Exp 6 <b>Titrimetric Analysis;</b> Standardization of NaOH	TOA and Cobalt lab report
Mar. 10	Exp 6 <b>Titrimetric Analysis;</b> Analysis of unknown acid composition	
Mar. 17	Exp 7 <b>Vinegar Analysis;</b> Design of an experimental analysis	TOA and Titrimetric lab report
Mar. 24	Exp 8 <b>Synthesis and Characterization of Aspirin</b>	TOA and Vinegar lab report
Mar. 31	Exp 8 <b>Synthesis and Characterization of Aspirin</b>	
Apr. 7	Exp 8 <b>Synthesis and Characterization of Aspirin</b>	
Apr. 14	Checkout of Lab	Aspirin lab report