

**Chemistry 1211L
Laboratory
General Chemistry I
Summer 2009**

Instructor: Mr John Kruger
214 Rogers Hall
Office Hours are 8:00-9:00 M-Th or by appointment
Phone 867-2917
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1 Credit Hour

Course Objectives: The student will understand:

1. Principals of laboratory safety
2. Data, uncertainty and data analysis using graphs
3. Applications of the mole
4. Basic Thermodynamics
5. Atomic emission spectroscopy
6. VSEPR and Lewis

The student will be able to:

1. Conduct basic scientific measurements of mass, volume and temperature
2. Analyze and interpret data using mathematical and graphical relationships.
3. Perform basic scientific experiments safely
4. Determine molecular structures and geometry using VSEPR and Lewis structures

Required Items:

1. CER Lab Packet for 1211 Lab (book store)
2. Carbon copy producing Lab notebook (book store)
3. Safety glasses (must have shatter resistant polycarbonate lenses and side shields, may not be tinted, sunglasses, shooting glasses and welding glasses are not acceptable)

Attendance

- Lab attendance is mandatory. Any unexcused absences from the laboratory will result in a zero for that lab. Per the NGCSU student handbook, "*When a student is compelled for any reason to be absent from class, the student should immediately convey the reason for the absence directly to the instructor. The student is responsible for all material presented in class and for all announcements and assignments. The decision to permit students to make up work that is required in any missed class resides with the instructor.*" All lab make ups must be requested from the instructor in writing within 48 hours of missed lab (email is acceptable).

- You must attend the lab section (day and time) for which you have registered.

Lab Information

- Lab reports are due at the beginning of the next lab period. Late lab reports will lose 10 points per business day that they are late.
- A 10 point prelab quiz will be given at the beginning of each lab session. This quiz will cover material from the prelaboratory readings. You will be allowed to use your completed prelab questions as a reference during this quiz.
- At the start of the lab you will turn-in the completed lab packet from the previous week's lab. Due to the number of students, for us to efficiently grade the labs everyone must organize their labs in the same manner. A completed lab packet should be arranged in the following manner.
 - **1.** Prelab page(s) arranged in numerical order
 - **2.** Data sheets arranged in numerical order
 - **3.** Post lab questions
 - * Graphs will be included in the section where the data displayed came from
 - ** All packets will be stapled together in this order
 - *** **There will be a 10 pt deduction for improperly organized labs.**
- Once they are submitted labs and quizzes become the property of the chemistry department and will not be returned. Grades will be available the following week and you can review your labs and quizzes during the lab or at my office during my office hours. After two weeks no more questions regarding those reports will be addressed.
- The carbon-copy notebooks will be used to collect data during the lab. No information will be written directly on to the data sheets during the lab. The data sheets in the module will be filled out later and turned in with the final lab report. **Before you leave the lab you notebook must be signed by the teaching assistant or myself. You will keep the original and turn-in the copy. Failure to get your data sheet signed or turned-in will result in a zero for that lab.**
- It is unacceptable to change your data in any fashion. The data in your final lab report is expected to match that on the copy you submitted. If you believe you made an error collecting the data, see me and we will try to coordinate a time for you to recollect.
- Your final grade will be an average of all the lab scores (lab score = lab report grade 90 points + lab quiz 10 points) on a standard 90-A, 80-B, 70-C, 60-D, <60-F. To account for unexpected emergencies one lab score will be dropped.

- All work submitted must be your own. Students will collect data as groups and you are allowed to work together but you must submit a final lab report written by you in your own words. Information technologies will be used to detect plagiarism.

Lab Rules

- No shorts, skirts, dresses or open toed shoes are allowed in the lab. Students violating the dress code will be required to go and change and no additional lab time will be provided.
- Safety glasses must be worn at all times. You get one warning. The second infraction will result in being removed from the lab and not allowed a make-up. If you are finished and wish to remove your glasses leave the laboratory.
- No eating, drinking, smoking, or dipping in the lab.
- Dispose of chemicals as directed. Never put anything back into the reagent bottles.
- Use common sense.

Lab Schedule

Week Of

5/11	Safety and Graphing	430 and 408
5/13	Relating Mass and Volume	484
5/18	Determine Empirical Formula	423
5/20	Write eq and ID Unk Using microscale technique	406
5/27	Sequence of Copper RXNs	480
6/1	Atomic Spectrum of Hydrogen	345
6/3	Lewis Structures	409
6/8	409 cont.	
6/10	Enthalpy of RXN	346
6/15	Charles Law	412
6/17	Final Lab Due NLT 4 PM	