

# Chemistry 1211 Laboratory - General Chemistry I

## Fall 2008

- Instructor:** Dr. Carole Brown  
208 Rogers Hall  
[cebrown@ngcsu.edu](mailto:cebrown@ngcsu.edu)  
864-1506
- Office Hours:** Monday, Wednesday, Thursday, and Friday at 11:00-12:00 Tuesday 10:00-12:00 and welcome by appointment
- Lecture:** Dependent on section registered for  
10:10am-11:05am MWF in 204 Rogers Hall
- Lab:** 2:30-5:30 Wednesday or Thursday  
*You must attend your scheduled day/time for both Lab and Lecture*

**Course Objectives:** The student will understand:

1. Principles 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

### Attendance

- Lab attendance is mandatory. Any unexcused absences from the laboratory will result in a zero for that lab. If you are ill or have serious personal problems contact the instructor prior to the lab to coordinate a make-up lab.
- You must attend the lab section (day and time) for which you have registered.

### Cheating and Plagiarism

Any attempt at cheating or plagiarism will not be tolerated and will result in being failed in the course, reported to the V.P. for Academic affairs, the Dean of Students and the Academic Integrity Council, which may ultimately result in suspension or expulsion.

### Lab Information

- Lab reports are due one week after data collection, at the beginning of the lab session. Late lab report 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 prelab 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.**

### 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 are provided and 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 | Topic  | Module #  | Pages   |
|---------|--|-----------|---------|
| 8/22    | No Lab   |           |         |
| 8/25    | Safety and Graphing  | 430 & 408 | 1-24    |
| 9/1*    | Relating Mass and Volume                                     | 484       | 25-36   |
| 9/8**   | No Lab   |           |         |
| 9/15    | Determining the Empirical Formula of a Compound              | 423       | 49-56   |
| 9/22    | Writing Chemical Equations and Identifying Unknown Compounds | 406       | 57-72   |
| 9/29    | No Lab   |           |         |
| 10/6    | A Sequence of Copper Reactions                               | 480       | 73-80   |
| 10/13   | The Atomic Spectrum of Hydrogen                              | 345       | 109-120 |
| 10/20   | Separating the Components of a Mixture                       | 461       | 37-48   |
| 10/27   | Lewis Structures   | 409       | 121-135 |
| 11/3    | No Lab   |           |         |
| 11/10   | Enthalpy of Neutralization                                   | 346       | 81-96   |
| 11/17   | Synthesis of Strontium Iodate Monohydrate                    | 341       | 97-108  |
| 11/24   | No Lab - Thanksgiving  |           |         |
| 12/2    | Final Lab Due for all on 12/4 by 4pm                         |           |         |

#### **No Late Labs will be Graded**

\* No lab Monday 9/1 (Labor Day Holiday) makeup Monday 9/8

\*\*Monday make-up for Labor Day

\*\*\*Monday and Tuesday labs only.