161-07 General Chemistry I

Mary Stroud
Instructor: Mrs. M. Stroud  
Office Hours: T, W, R: 12:20pm - 1:20pm and by appointment  
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**Text:** Slowinski, and Wolsey: *Chemical Principles in the Laboratory*  

**Course Description:** GENERAL CHEMISTRY I LAB (1.00) involves the practice of basic operations of chemical laboratory work. CHEM 161-07 meets on Wednesdays from 1:30 pm-4:20 pm. Corequisite: CHEM 160.  

**Overview of course and Course Learning Objectives:** This is a laboratory course in which students will conduct experiments that exemplify concepts covered in the CHEM 160 lecture course. The student will learn to 1) recognize and manipulate basic laboratory equipment, 2) observe, record and interpret data, and 3) prepare written laboratory reports that are clear, concise, and accurate.  

**TENTATIVE SCHEDULE**  

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<td>8/27</td>
<td>Lab Orientation, Check In</td>
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<td>9/3</td>
<td>Exp. 1 - Density</td>
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<td>Exp. 2 - Paper Chromatography</td>
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<td>Exp. 6 - Hydrates (Parts A, B, C, and D; ASA #1a to d only)</td>
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<td>Exp. 4 - Determination of Chemical Formula</td>
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<td>Exp. 5 - Identification of Unknown Compounds</td>
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<td>No Class - Submit Completed Report</td>
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| 10/15     | Lab Quiz I AND  
Exp. 7 - Analysis of an Unknown Chloride | 41 |
| 10/22     | Exp. 30 - Determination of Iron- A Redox Titration | 241 |
| 10/29     | Exp. 11 - Atomic Spectrum of Hydrogen | 69 |
| 11/5      | Exp. 12 - Alkaline Earths and Halogens | 79 |
| 11/12     | Exp. 13 - The Geometrical Structures of Molecules | 87 |
| 11/19     | Exp. 14- Heat Effects and Calorimetry (Part A, B and C) | 97 |
| 11/26     | NO LAB – Submit Completed Lab Report | --- |
| 12/3      | Gas Laws: Boyle’s Law / Charles’ Law | Handouts |
| 12/10     | Check Out AND Lab Quiz II | --- |

**TEXT AND SAFETY GOGGLES ARE REQUIRED FOR THE COURSE.**  
A scientific calculator is also recommended.  

*CHEM 160 is a co-requisite for CHEM 161. CHEM 161 Satisfies NSTA Reporting Standards for Teaching Science Numbers 1a, 1b, 1c, 1d, 1e, 2c, 3b*

**Note: In an effort to keep pace with the corresponding General Chemistry Lecture Course, CHEM 160, the laboratory schedule may be slightly adjusted during the FALL session.**

**IMPORTANT NOTE:** PLEASE CHECK CANVAS DAILY FOR UPDATES AND ANNOUNCEMENTS
Lab Quizzes - 150 points (2 @ 75 pts. each); Lab reports - 600 points (12 @ 50 pts. each)

Grading Scale (% of Possible Points):
- A = 93-100%
- A- = 90-92%
- B+ = 87-89%
- B = 83-86%
- B- = 80-82%
- C+ = 77-79%
- C = 73-76%
- C- = 70-72%
- D+ = 67-69%
- D = 63-66%
- D- = 60-62%
- F = <60%

It should be noted that according to the Xavier University Catalog, a grade of “A” is earned for EXCEPTIONAL performance. This is the grading policy of the faculty of the Chemistry Department as well. The policy can be found at http://www.xavier.edu/chemistry/dept_policies_grading.cfm

Academic Misconduct Policy: A grade of zero will be given to any student violating the University Honesty Policy. The student may appeal according to normal University procedures as stated in the University catalog.

Class Policies
Pre-Labs: Before coming to class, please prepare a pre-lab. The pre-lab consists of:
- a short summary of the objectives of the lab
- key chemical equations/relationships that will be utilized in the lab
- a brief summary of the main steps of the procedure
- a waste disposal note
- completion of the advanced study assignment (ASA) found in the lab manual.

The pre-lab is due at the beginning of the class, and must be checked and initialed by the instructor for credit.

Lab reports: The completed lab report includes:
- a cover page (title of experiment, student name, lab section and date)
- the pre-lab
- the data record obtained in the experiment (i.e. all observations & measurements with examples of calculations using the data)
- conclusions, given the experimental objectives, and answers to any post-lab questions as indicated on CANVAS.

(Note: 1) The data sheets or data tables initialed by the instructor must be submitted with the report.
2) Errors made on data sheets should not be erased or obliterated. Rather, place a single line through the error (e.g., 44 degrees F) or use an X through an entire section when correcting an error. Initial and date the correction as well.)

Due Dates: Generally, lab reports are due the next lab day following completion of an experiment. Due dates for electronic submissions via CANVAS will be posted on the course website.

Late reports: Late reports receive 10 points penalty initially. Reports which are more than one week late will not be graded, but may receive half of possible points for pre-lab preparation and raw data.

Absences: Missed lab experiments can only be made up under extenuating circumstances at specified makeup times, with the permission of the lab instructor. Un-excused, missed labs receive zero points. However, students may receive 12 points partial credit for completing the pre-lab assignment.

Attire and Lab Safety: In the laboratory, safety glasses/goggles, fully covered torso, long pants (not shorts) and fully covered feet (shoes or sneakers only) are required. Lab aprons are available, as are gloves. Long hair should be tied back. No food, drinks, or gum are permitted in lab. You will receive a 5 point penalty for each documented safety infraction which occurs in lab.

Special Accommodations: At the beginning of the semester, students should promptly inform/notify the instructor of any individual medical or other conditions that may require special attention or accommodations. Reasonable consideration will be given for these conditions, particularly with notification from the LAC. Please contact/visit the Xavier’s LAC (Learning Assistance Center) for assistance and further information.

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