

## CHEMISTRY 111, INTRODUCTORY CHEMISTRY LABORATORY

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### COURSE MATERIALS

1. Laboratory Notebook
2. Safety Goggles/Glasses

### LABORATORY SCHEDULE

	Title of Experiment	Experiment #
<b>Aug 23</b>	<b>Measurements and Density – Part II</b>	<b>Exp 1 / Safety in the Chemistry Lab &amp; Check-In</b>
<b>Aug 30</b>	Formula and Composition of a Hydrate – Part A	Exp 2 (2 Weeks)
<b>Sep 6</b>	Formula and Composition of a Hydrate – Part B	Exp 2
<b>Sep 13</b>	Identification of Common Chemicals	Exp 6 (2 Weeks)
<b>Sep 20</b>	Identification of Common Chemicals	Exp 6
<b>Sep 27</b>	Titration of Acids and Bases - Part B	Exp 7
<b>Oct 4</b>	Gravimetric and Volumetric Analysis - Part A & B	Exp 8 (2 Weeks)
<b>Oct 11</b>	<b>Fall Recess / No Lab</b>	
<b>Oct 18</b>	Gravimetric and Volumetric Analysis - Part C	Exp 8
<b>Oct 25</b>	Evaluation of the Gas Law Constant	Exp 10
<b>Nov 1</b>	Thermochemistry: Heat of Reactions	Exp 11
<b>Nov 8</b>	Spectrophotometric Analysis of Aspirin – Part B	Exp 12 (2 Weeks)
<b>Nov 15</b>	Spectrophotometric Analysis of Aspirin – Part C	Exp 12
<b>Nov 22</b>	<b>Lab Final - based on Experiment 6</b>	<b>Timed test/Check-out</b>
<b>Nov 29</b>	Molecular Models and Covalent Bonding / Theoretical Lab	Exp 13 (done in a reserved classroom)

### CHEMISTRY PEER LEARNING

Chemistry Peer Learning Hours are dedicated times available for students to come together and work on chemistry! If you are looking for a place to work on your chemistry assignments or need assistance with your chemistry classes, Peer Learning Hours are here for you. No need to sign-up. Stop-by at any or all of the Peer Learning Hours. All Peer Learning Hours are staffed by a chemistry tutor to assist you.

**Chemistry Peer Learning Hours:** Tuesday 6:00 – 8:00 pm in Caputo 256  
Wednesday & Thursday 2:00 – 4:00 and 6:00 – 8:00 in Caputo 256  
Saturday 12:00-3:00 in McNairy Library 118

### GRADING SYSTEM

Lab Notebooks (graded 2 times 15 points each)	30 pts
Lab Reports (9 lab reports 20 points each)	180 pts
Lab Final (Experiment 6 timed test)	<u>40 pts</u>
Total	250 pts

### OFFICE HOURS

Monday, Wednesday, Friday 9:30-10:30; Thursday: 10:00-12:00. Feel free to come by any time that I am in my office. If you have difficulty finding a time to meet with me, make an appointment to see me.

### ATTENDANCE

Regular attendance is expected for all laboratories. If an absence results in a missed lab, a request for excused absence form (attached) must be submitted to the instructor. Absences are excused for illness, family emergencies or university activities. Absences due to university activities must be discussed with the instructor

in advance and arrangements made for making up the missed work.

### **ACADEMIC HONESTY**

Students are expected to be familiar with the University's policy on academic honesty and dishonesty found in the *Student Handbook* and the *Academic Honesty and Dishonesty* brochure. Academic dishonesty includes cheating on an exam or quiz, presenting another student's work as one's own in a laboratory report or notebook, fabricating data in a laboratory experiment. Students are encouraged to work together on homework assignments, preparation for exams and laboratory reports. However, the results submitted in a laboratory report must represent the student's own work.

### **LABORATORY**

All laboratory procedures can be found on D2L. Before coming to lab you are expected to have diligently studied the experiment and outlined the procedure in your laboratory notebook. You should bring your laboratory notebook, and safety goggles to all labs. Laboratory experiments should be done during the assigned laboratory period. Any work outside of this period must be approved by the lab instructor; a chemistry faculty member must be available to supervise your work.

### **LABORATORY REPORTS**

Laboratory report sheets (found in the laboratory procedures on D2L) will be due after each completed experiment (several experiments require 2 lab periods). These report sheets will be completed using the data that you have recorded in your laboratory notebooks. Report sheets should be neat and orderly. All numerical data must have correct significant figures and proper units.

### **THE LABORATORY NOTEBOOK**

The laboratory notebook is a permanent record of your work in the laboratory. You must have your notebook with you in order to work in the lab. All notebooks must be permanently bound and begin with a table of contents. All entries should be in ink. Each page must be consecutively numbered. As each page is completed you should sign/initial and date the page. The procedure must be outlined in the notebook and the safety precautions listed before coming to lab. All data must be recorded in the notebook using correct significant figures and proper units. Never write data on another sheet of paper with the idea of transferring it to the notebook. Notebooks should be relatively neat and orderly, however, data should never be recopied into another notebook. If an error is made, do not obliterate the data (also do not use white out, tear out pages or tape in new pages). Draw a single line through any errors and write the correct data.

The notebook is a record of your work as it is done. The notebook should be kept in such a way that the instructor can turn to any experiment and tell exactly what you did during the experiment. All data must include the appropriate units and be labeled to identify the data. All calculations, graphs, and tables must be included in the notebook. All lab notebooks should be reviewed and initialed by the instructor at the end of each laboratory period.

A conclusion will be required for some lab reports. The conclusion should be one paragraph. It should state the major results of the experiment. This statement of results should agree with the purpose of the experiment written at the beginning of the report. This should be followed by a statement describing whether you are confident in the results. The remainder of the conclusion should be an argument to convince the reader why you feel your results are appropriate or not. This argument can refer to the agreement between multiple trials, agreement with other student results, trends in the data such as a linear graph or other observations from the experiment.

Laboratory notebooks will be evaluated on the following criteria:

1. Each page: page #, date completed and name
2. Format: organization, neatness, completeness
3. Purpose: describe what is being measured or determined
4. Outline of the Procedure
5. List of Safety Precautions
6. Data Presentation: data in tabular form, significant figures, labels and units
7. Sample calculations: neat orderly, with units and correct significant figures
8. Results: quality of results
9. Graphs: title, labels, units

*Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to comply with the requirements of Title IX of the Education Amendments of 1972 and the University's commitment to offering supportive measures in accordance with the new regulations issued under Title IX, the University requires faculty members to report to the University's Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. **Faculty members are obligated to report to the person designated in the University [Protection of Minors policy](#) sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred.***

**Request for Excused Absence** To be completed within one week of returning to class.

Student Name:

Dates of Absence:

Reason for Absence (circle one): Illness, Family Emergency, University Activity

I request this absence be excused and that: (check all that apply)

\_\_\_\_\_ my final exam grade be substituted for the missed lecture quiz.

\_\_\_\_\_ my final exam grade be substituted for the missed test.

\_\_\_\_\_ my final exam grade be substituted for the missed pre-lab quiz.

\_\_\_\_\_ I be allowed to make-up the missed laboratory experiment. The lab must be made-up and the laboratory report submitted for grading within one week of returning to class.

Attach documentation to support the request for an excused absence.