CHEM 119
Spring 2005

INSTRUCTOR: Dr. Steven Wiles   OFFICE: Sci 131
PHONE: 657-1648   E-MAIL: swiles@msubillings.edu

OFFICE HOURS: MWF 1:00-2:00 & R 2:30-3:30 or by appt

OUTCOMES AND ASSESSMENT:
Chemistry 119 is a laboratory course designed to enable you to develop your analytical skills as well as introduce you to laboratory practices and techniques. As far as possible, concepts learned in the lecture course (Chem 116) will be used here. This will be assessed by graded weekly report sheets, weekly quizzes, graded lab note books, comprehensive final and instructor evaluation of lab performance.

REQUIRED MATERIALS:
2. SAFETY GOGGLES!!!! These are mandatory. You will not be allowed in lab without them.
3. Lab Note Book - A *bound* notebook, either composition or graph paper.

GRADING:
1. Prelab questions - These are to be turned in at the beginning of each lab period and are worth 5 pts. each.
2. Report Sheets - These are to be turned in by 2:00 pm two days after the lab is completed (e.g. for Monday’s lab section the report sheet is due Wednesday at 2:00 pm). The report sheets are worth 20 pts each.
3. Quizzes - There will be a quiz every week at the beginning of the discussion session. Half the quiz will test procedural understanding of the experiment scheduled for that day. The other half of the quiz will test conceptual understanding of the previous week's experiment. The quiz will be worth 15 pts.
4. Lab Note Book - Keeping a lab note book is required. For each experiment data and observations will be recorded in the note book and then transferred to the report sheet, refer to Appendix III for format. The note book will be randomly collected 3 times during the semester and is worth a total of 60 pts.
5. Lab final - A final worth 50 pts will be given the last lab period of the semester.
6. Lab evaluation - The lab instructor will evaluate your performance in lab throughout the semester. Worth 25 pts.
7. A written report worth 30 pts will be required for the qual lab.
8. The grading scale will be as follows
90-100   A  
80-89    B  
70-79    C  
60-69    D  
59 and below   F

Late labs will have a minimum of 5 points deducted from the lab report total. A late lab will no longer be accepted one week after the lab was originally due.

Grading:
1. 8 quizzes worth 15 points each (120 pts total)  24%
2. Final exam worth 50 points 10%
3. Lab work 25 points for each experiment (200 pts total) 40%
4. Lab note books 20 pts each collection (60 pts total) 12%
5. Written report on qual. lab (45 pts) 9%
6. Lab evaluation (25 pts) 5%

Lab Safety Goggles are required at all times in lab. No eating or drinking in the labs.

**Lab Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab</th>
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<tbody>
<tr>
<td>Jan. 24, 25, 26</td>
<td>Check in</td>
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<tr>
<td>Jan. 31, Feb 1, 2</td>
<td>Exp 1 (Molecular Geometry Lab)</td>
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<td>Feb. 7, 8, 9</td>
<td>Exp 2 (MM Determination by Depression of Freezing Point)</td>
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<tr>
<td>Feb. 14, 15, 16</td>
<td>Exp 3 (Rates of Chemical Reactions, A Clock Reaction)</td>
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<td>Feb. 21, 22, 23</td>
<td>No Lab Presidents’ Day Week</td>
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<tr>
<td>Feb. 28, Mar 1, 2</td>
<td>Exp 4 (Equilibrium Constant)</td>
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<tr>
<td>Mar. 7, 8, 9</td>
<td>Spring Break</td>
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<tr>
<td>Mar. 14, 15, 16</td>
<td>Exp 5 (Le Chatelier's Principle)</td>
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<tr>
<td>Mar. 21, 22, 23</td>
<td>Exp 6 (Antacid Tablets) (Reportsheet due 3/28/2005)</td>
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<tr>
<td>Mar. 28, 29, 30</td>
<td>Exp 7 (pH, Hydrolysis and Buffers)</td>
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<tr>
<td>April 4, 5, 6</td>
<td>Exp 8 (Qualitative Analysis)</td>
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<tr>
<td>April 11, 12, 13</td>
<td>Exp 8 (Qualitative Analysis Cont.) (Report due 4/22/2005)</td>
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<tr>
<td>April 18, 19, 20</td>
<td>Exp 9 (Determination of % Oxalate)</td>
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<tr>
<td>April 25, 26, 27</td>
<td>Final Exam / Check out</td>
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**You must check-out of your lab drawer. Failure to do so results in a $20 check-out fine**
The MATERIAL SAFETY DATA SHEETS (MSDS) for any chemical used in this laboratory can be found in the MSDS red binders located in Science Technical Services (STS) in Sci 241. These sheets contain information on hazards associated with the chemical as well as information on its proper handling and storage.

**POLICY ON ACADEMIC HONESTY:** It is your responsibility to familiarize yourself with the Student Handbook. In particular, you should understand Part IX: Code of Conduct, paying special attention to subsection B.1, page 78 (Academic Misconduct). All students are expected to adhere to the highest standards of academic honesty and refrain from any action that is dishonorable or unethical. In all examinations, quizzes, lab reports, etc., students are expected to submit their own work entirely. Cheating or alleged cheating will result in a grade of zero (failure) for the work involved, and may lead to a zero in the course.

**POLICY ON STUDENT CONDUCT:** Disruptive behavior during lab will not be tolerated. Students must obey the basic rules of safety while in lab. Any students indulging in disruptive or dangerous behavior will be asked to leave the lab and will not be allowed to make-up the lab. If a student needs to use their cell phone, the call must be taken in the hall outside lab.

Occasionally, a student will have a disagreement with the professor or with the teaching assistants over an issue of grading. Such discussions, whether in class or in office, are to be kept civil. Verbal abuse in any form will NOT be tolerated. Any student indulging in such behavior will be reported to the Dean of Arts and Sciences and The Office of Student Affairs.