CHEMISTRY 213 - LABORATORY SCHEDULE

Spring 2020

REQUIRED EYE PROTECTION: Students must wear the approved goggles issued by the department at all times in the laboratory—NO EXCEPTIONS.

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<th>Week of:</th>
<th>EXPERIMENT</th>
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| Jan. 13th        | CHECK-IN / SAFETY ORIENTATION: Safety in the Laboratory; Glassware &
                   | Equipment/Data Representation and Recording.                               |
| 2. Jan. 20th     | Martin Luther King (Holiday- No labs)                                       |
| 3. Jan. 27th     | Lab 1: Determining Solubility of an Unknown Salt at Various Temperatures   |
| 4. Feb. 3rd      | Lab 2: Colligative Properties of Solutions - Freezing Point Depression      |
| 5. Feb. 10th     | Lab 3: Reaction Kinetics – Determining a Rate Law                           |
| 6. Feb. 17th     | Lab 4: Chemical Equilibrium and Le Chatelier’s Principle                    |
| 7. Feb. 24th     | Lab 5: Determining $K_{eq}$ for Iron Thiocyanate by Spectrophotometry      |
| 8. March 2nd     | LAB MIDTERM EXAM                                                            |
| 9. March 9th     | Spring Break- No Labs                                                       |
| 10. March 16th   | Lab 6: Determining the Acid Dissociation Constant, $K_a$, for a Weak Acid  |
| 11. March 23rd   | Lab 7: Determining $K_{sp}$ of Lead (II) Iodide                            |
| 12. March 30th   | Lab 8: Qualitative Analysis of a Group of Cations                          |
| 13. Apr. 6th     | Lab 9: Estimation of Absolute Zero                                          |
| 15. Apr. 20th    | LAB FINAL EXAM                                                              |

*FAILURE TO CHECK OUT MAY RESULT IN A FAILING GRADE FOR THE ENTIRE SEMESTER.*

* Grading: The overall lab grade is a weighted average, and is calculated using the formula below:

\[
\text{Lab grade} = (\text{Lab average} \times 0.70) + (\text{Midterm Exam} \times 0.15) + (\text{Final Exam} \times 0.15)
\]

Grade breakdown:                   | 100 pts x 11  |
-----------------------------------|---------------|
Worksheet and labs                 |               |
Midterm exam                       | 100 pts       |
Final exam                         | 100 pts       |
Total                              | 1300 pts      |

Letter grades are assigned based on the overall lab grade compared to the following cutoffs:

90% = A;  80% = B;  70% = C;  60% = D;  <60% = F
CHEMISTRY 213 – Course Information

Spring 2020

Lab Coordinator: Dr. Fotovat, FR336; rfotovat1@niu.edu

Office Hours: Tue. 11:00 AM – 1:00 PM; Fri. 12:00 PM – 1:00 PM or by appointment. Please email me to make an appointment.

Phone: (815) 753-1131

CHEM 213 TA Team:
Ferreira: Z1877759@students.niu.edu
Macias: z1765461@students.niu.edu
Minasyan: aminasyan1@niu.edu

On-Line Course Information: Blackboard (https://webcourses.niu.edu)

Course Materials
2. Laboratory worksheets and practice exams are available on the Blackboard website.

Intended Learning Outcomes: On completion of this course, students are expected:
1. To have learned how to write chemical formulas, name compounds, perform chemical calculations, make observations and record the data from those observations appropriately.
2. To be familiar with the chemical and physical properties of gases, liquids, solids, and aqueous solutions.
3. To have learned how to work safely in a chemistry laboratory.
4. To have learned how to manipulate scientific equipment and to carry out laboratory experiments.

Policies for Introductory Chemistry Laboratories
1. Attendance: Chemistry is an experimental science, and the laboratory component is your opportunity to observe how science works. Participation in all lab exercises is mandatory.
   Failure to attend a given lab will result in the loss of any points associated with that lab exercise unless prior arrangements have been made. You may be excused from a given lab without penalty if you have reasonable medical or personal circumstances and can provide adequate documentation to validate your absence. You should inform your lab instructor/TA as soon as possible before or after missing the lab. If you know in advance that you will miss the lab it may be possible for you to make up the lab at a later date in the same week, provided space is available in the lab section in question. In that case, your TA should fill out a lab pass that you can present when you attend the make-up lab. If it is not possible to make up the lab, then you may be granted an excused absence (grade of “E” in the gradebook) at the discretion of the TA or instructor, or you may be able to perform a “dry lab” using representative data supplied by your TA.

2. Lab Preparation: You are expected to be adequately prepared when you show up for each lab exercise. Preparation for lab should include the following:
   – Read the introduction section for the lab and complete the pre-lab exercises before arriving at the lab Your TA will initial your pre-lab at the beginning of the lab period.
     You will not be allowed in the lab until the pre-lab is completed, and you will not receive credit for the pre-lab if it is not completed before you arrive.
   – A pre-lab quiz will be given as part of the pre-lab preparation before lab activities.
– Arrive at lab on time, appropriately dressed, and with all required lab materials (i.e., pre-lab exercises, lab manual, etc.).

3. **Lab Reports:** After completing the lab exercise, you should complete the lab report and any post-lab questions and turn the lab report in to your TA at the beginning of the next lab period. Late lab reports are subject to deduction of 10 points per day. Each lab exercise is worth 100 points. Grading of individual labs will be based on a consistent grading scale which includes points for the pre-lab (20 points); quiz (10 points); data, observations, and calculations (40 points); post-lab (20 points); and safety and efficiency (10 points).

4. **Lab Clearances and Withdrawals:** If you wish to withdraw from the lab during the add/drop period, you can adjust your schedule online through MyNIU. If you wish to withdraw after the official add/drop period has closed, you will need permission from your major college office (e.g., College of Liberal Arts and Sciences), and you will need to check out of your lab drawer. You should make arrangements with your TA to complete the checkout and to complete the Laboratory Clearance Form. Copies of this form are available at the Chemistry Stockroom. You should complete the form, obtain all required signatures, and return the form to your major college office. Failure to follow appropriate check-out procedures (including completion of the Lab Clearance Form) may result in a failing grade for the semester.

5. **Lab Grades:** Laboratory grades will be determined using a weighted average as follows:

\[ \text{Lab grade} = \text{Lab Reports/Worksheets (70\%)} + \text{Midterm Exam (15\%)} + \text{Final Exam (15\%)} \]

Final grades will be assigned based on location of weighted average in the following distribution:

- **A** = 90\%  
- **B** = 80\%  
- **C** = 70\%  
- **D** = 60\%  
- **F** < 60\%

**Tutors and Lab TA Office Hours:** The Department of Chemistry and Biochemistry maintains a free Tutor Room for General Chemistry students. The Tutor Room is in Faraday 247 and the schedule will be posted online [http://go.niu.edu/chemhelproom](http://go.niu.edu/chemhelproom) and outside the help room door. Students are also encouraged to ask laboratory TAs for assistance in understanding the lecture material.

**Paid Tutors** - Names of tutors for hire are available from Linda Davis in Faraday 319 (Dept. office).

**Academic Integrity** – Good academic work must be based on honesty. Cheating and plagiarism are considered to be serious offenses. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university.

**Accommodations for students with disabilities** – Northern Illinois University is committed to providing an accessible educational environment in collaboration with the Disability Resource Center (DRC). Any student requiring an academic accommodation due to a disability should let his or her faculty member know as soon as possible. Students who need academic accommodations based on the impact of a disability will be encouraged to contact the DRC if they have not done so already. The DRC is located on the 4th floor of the Health Services Building, and can be reached at 815-753-1303 (V) or drc@niu.edu.