

# CHEMISTRY 213 - LABORATORY SCHEDULE

Fall 2019

**TEXT/MATERIALS:** Laboratory worksheets and handouts are available on the Blackboard website.

**Lab manual:** CHEM 213, Lab manual: CHEM 213, Fountainhead Press (2018); ISBN 978-1-68036-696-9

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

Week of:	EXPERIMENT
1. Aug. 26 <sup>th</sup>	<b>CHECK-IN / SAFETY ORIENTATION:</b> Safety in the Laboratory; Glassware & Equipment/Data Representation and Recording.)
2. Sep. 2 <sup>nd</sup>	<b>Labor Day (Holiday_ No labs)</b>
3. Sep. 9 <sup>th</sup>	Determining Solubility of an Unknown Salt at Various Temperatures
4. Sep. 16 <sup>th</sup>	Colligative Properties of Solutions - Freezing Point Depression
5. Sep. 23 <sup>rd</sup>	Reaction Kinetics – Determining a Rate Law
6. Sep. 30 <sup>th</sup>	Chemical Equilibrium and Le Chatelier's Principle
7. Oct. 7 <sup>th</sup>	Determining $K_{eq}$ for Iron Thiocyanate by Spectrophotometry
8. Oct. 14 <sup>th</sup>	<b>LAB MIDTERM EXAM</b>
9. Oct. 21 <sup>st</sup>	Determining the Acid Dissociation Constant, $K_a$ , for a Weak Acid
10. Oct. 28 <sup>th</sup>	Determining $K_{sp}$ of Lead(II) Iodide
11. Nov. 4 <sup>th</sup>	Qualitative Analysis of a Group of Cations
12. Nov. 11 <sup>th</sup>	Estimation of Absolute Zero
13. Nov. 18 <sup>th</sup>	Electrochemical Cells and the Nernst Equation / <b>CHECK OUT</b>
14. Nov. 25 <sup>th</sup>	<b>Thanksgiving (Holiday_ No labs)</b>
15. Dec. 2 <sup>nd</sup>	<b>LAB FINAL EXAM</b>

**\*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:

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

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

$$90\% = A; \quad 80\% = B; \quad 70\% = C; \quad 60\% = D; \quad <60\% = F$$