# CHEM 342: Physical Chemistry II Laboratory

Dr. Dan Albert

Spring 2024

## Contact Information

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*The best way to reach me is via university email.*

## Office Hours

I have an open door policy for meeting with you outside of class. If you ever walk by my door and it is open please feel free to stop to talk about any questions, comments, or concerns you have. The following times you can be guaranteed to find me available:

- Tuesdays from 10:30- 12:00
- Wednesdays from 2:00 - 3:30
- Thursdays from 9:00 - 11:00

*If you cannot make it to office hours please feel free to set-up an alternative time to meet with me by corresponding with me via email.*

## Laboratory Assignments

This document details the laboratory assignments for CHEM 342.

## Grading

Your grade in the laboratory portion of this course will be calculated using the following components.

| Category | Percentage of Lab Grade (%) |
|---|---|
| Laboratory Analysis Reports | 20 |
| Full Laboratory Reports with Revisions | 60 |
| Peer Reviews of Lab Reports | 10 |
| Laboratory Notebook | 10 |
| Total | 100 |

## Laboratory Analysis Reports

Laboratory Analysis Reports should be completed entirely in your laboratory notebook. These reports should include data analysis, sample calculations, and answers to all questions posed in the laboratory handouts. Laboratory Analysis Reports will be completed for the last two labs of the semester. Each Laboratory Analysis Report is worth 10 percent of your lab grade.

## Full Laboratory Reports with Revisions

For four of the experiments we carry out this semester you will be required to write a full laboratory report in the style of submission to a professional journal. This includes an abstract, introduction, experimental, results, discussion, conclusion, and reference sections. Each of these full laboratory reports with revisions will be worth 15 percent of your lab grade. The first draft and final draft are given equal weighting.

## Peer Review of Reports

You will be asked to provide anonymous feedback on three laboratory reports of your peers. You will be assessed on the quality of the feedback given to your peers. You will assess four full laboratory reports during the semester.

## Laboratory Notebook Checks

Organized and detailed laboratory notebooks must be maintained throughout the semester. We will be using electronic laboratory notebooks this semester with iPads and OneNote. All information from labs and data analysis completed should be incorporated into your electronic laboratory notebook. You should create a separate page in your personal notebook for each experiment.

# Laboratory Schedule

The instructor reserves the right to change this schedule as needed. Any changes will be communicated via an in-class announcement.

| Week | Laboratory Work | Laboratory Assignment Due |
|---|---|---|
| 1/16 | Laboratory Notebooks | |
| 1/23 | Kinetic Parameters Experiment | |
| 1/30 | Kinetic Parameters Experiment | |
| 2/6 | Partitioning Thermodynamics | **Kinetic Parameters Lab Report** |
| 2/13 | Partitioning Thermodynamics | |
| 2/20 | Rotation Experiment 1 | **Partitioning Thermodynamics Lab Report** |
| 2/27 | Rotation Experiment 1 | |
| 3/5 | SPRING BREAK NO LAB | |
| 3/12 | Computational Chemistry Lab | **Experiment 1 Lab Report** |
| 3/19 | ACS Meeting NO LAB | |
| 3/26 | Rotation Experiment 2 | **Computational Lab Report** |
| 4/2 | Rotation Experiment 2 | |
| 4/9 | Rotation Experiment 3 | **Experiment 2 Analysis** |
| 4/16 | Rotation Experiment 3 | |
| 4/23 | Check-Out/Make-Up | **Experiment 3 Analysis** |
| 4/30 | No Lab | |