

CHEM1430: Physical Chemistry Laboratory I
SUMMER 2018 Thaw 400

DIRECTOR: Dr. Eugene Wagner
OFFICE: Thaw 400
OFFICE HOURS: at lab or by email.
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INSTRUCTORS: Eugene Wagner
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SUPPORT MATERIALS:

- 1) *Physical Chemistry Laboratory I Manual* – Available online at <http://chemicaleducation.org>
- 2) Goggles/Safety Glasses
- 3) Electronic Lab notebook – Use Google Docs or cloud based Word
- 4) USB drive to store your data or cloud drive to upload data.
- 5) All computers in the lab are connected to the Internet. Feel free to use this resource but do not import or download any executable files.

OBJECTIVES OF COURSE: The primary purpose of this course is to **increase your ability to critically think and analyze data and information** to solve problems. The secondary purpose is to become familiar with instrumentation and lab techniques related to physical chemistry. The most important attributes that you must bring to this course are an enthusiasm for learning, an open mind, and ambition.

ATTENDANCE POLICY: Attendance at all lab meetings is required and very important. You must be present and actively engaged at all lab meeting. Any exceptions must be communicated to the TA or Dr. Wagner before the absence or as soon as possible. See grading scheme for more information.

DISABILITY SERVICES: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact me and the Office of Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

ACADEMIC HONESTY: Students are responsible for knowing and observing the University of Pittsburgh's Code of Student Academic Integrity, which forbids cheating, fabrication or falsification of information, multiple submissions of academic work, **plagiarism**, abuse of academic materials, and complicity in academic dishonesty. Academic evaluation in this course includes a judgment that the student's work is free from dishonesty. Students who are suspected of violating this code will be required to participate in the legal procedural process as outlined in the University Guidelines on Academic Integrity.

POLICY FOR EYE PROTECTION CHEMISTRY TEACHING LABORATORY:

Anyone in the physical chemistry laboratory is required by the University and Department of Chemistry to wear approved safety eye ware at all times. There are no exceptions. SPLASH PROOF SAFETY GOOGLES are mandatory for the prep room area and when using a vacuum line. In addition a face shield must be used when dispensing liquid nitrogen. Any student not in compliance with these rules will first receive a verbal warning from the laboratory instructor. After a second offense, the lab instructor will deduct 5 points from course points (see below). Any student receiving a third warning during the same lab period will be dismissed from that lab and have an additional 15 points deducted from course points. Gross negligence for safe and professional lab work will result in additional points lost, beyond that outlined above. Any student dismissed from two lab periods during the semester for violation of the eye safety policy will meet with Dr. Wagner to determine if additional action, such as dismissal from the course, or a grade of F for the course is appropriate. Any additional violations of this policy or other safety procedures will result in a grade of F for the course.

CODE OF CONDUCT AND PROFESSIONALISM: *You will be required to always conduct yourself in a professional and courteous manner* toward the instructors and all students in the class. Failure to do so will result in dismissal from the class period and points deducted from your class score.

GRADING SCHEME:

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| Performance (7 experiments) | 0 to -70 points | - Coming to lab on time, properly prepared, good lab technique, safety, knowledge, participation in experimental work, & <u><i>clean up</i></u> |
| Pre-lab assignments (variable pts x 7 reports) | 100 points | - see website for details |
| Written reports (100 pts x 7 reports) | 700 points | - see website for details. |
| Presentation rough draft | 25 points | |
| Oral presentation | 150 points | - 15 min report (including 3 minutes for Q&A) presented to class. |
| Peer grading and participation of oral presentations | 25 points | - these points are for your active engagement and asking questions while your classmates present their work. |
| Total | 1000 points | |

- The workload in this course is designed to require each student to write his/her own lab report. However, given the short timeline for the summer semester, you are allowed to write reports with one other student. It is the student's responsibility to effectively communicate with lab partners and complete the work and reports on time. **The instructor does not organize or manage these partnerships or intervene when there are issues.**
- The oral presentation report is an individual effort and cannot be on the same experiment as your lab partner. It is expected that you will be using PowerPoint.
- Each experiment requires specific information to be included in the pre-lab assignment, which is to be completed and submitted before the start of the experiment. Everyone does their own pre-lab assignments, regardless of whether you have a lab partner or are collaboratively writing a report. You will not be allowed to begin the experiment until the pre-lab has been received. Pre-lab assignment information should also be included in the full lab report. The first page of your report should include, Title, Names of Authors, Affiliation, three hypotheses, 150 word abstract. Discussion of hypotheses should be included in the discussion section of report. Any calculations or questions required for the pre-lab as outlined on the grading rubrics should also be incorporated into the full lab report.
- All pre-lab assignments and written reports are submitted electronically through a Box shared folder. These documents must be in Word format in order to submit.
- Written reports are due at the next lab meeting after completing the experiment. Pre-labs are due by 10 am on the day of the experiment. A mandatory 10% - 25% is deducted for any late assignment. How much is deducted is at the discretion of the instructor. Assignments late beyond three class periods will not be accepted. You are strongly encouraged to discuss any potential late assignment with you instructor before it is due.

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| A-,A,A+ | 88% ↑ | (above 880 points) | Exact "+" & "-" letter grade assignments will be determined by Dr. Wagner |
| B-,B,B+ | 75 – 87% | (750 – 879 points) | |
| C-,C,C+ | 65 – 74% | (650 – 749 points) | |
| D-,D,D+ | 55 – 64% | (550 – 649 points) | |
| F | 55% ↓ | (below 550 points) | |