



CHM4411L: Physical Chemistry Laboratory

Summer 2024 (May 13 – August 9)
(2 Credit Hours)

[Course Website](#)

Communication Policies:

Office Hours: Office hours for both the instructor and the TAs are posted online

Email: communication with all instructors and TAs should be sent through Canvas and should include your section number and group designation. Please ensure that your Canvas account is configured to send notifications to your preferred email address. We will make a consistent effort to respond to emails within 24 hours if sent Monday through Friday. Do not wait until the last minute to email regarding questions for an assignment, as you may not receive a response until after the deadline.

Meeting Times:

Lecture – LEI 242

Tuesday

6th period (3:30 – 4:45 PM)

Lab – LEI 248

Thursday

Periods 4-7 (12:30 – 6:15 PM)

Course Materials and Manuals: All course materials will be available through our course Canvas site linked above. There are no printed textbooks or lab manuals.

Learning Objectives

The overall learning objective of this course is to develop critical thinking through laboratory experiments, analysis of experimental data, and communication of that knowledge. More specifically, objectives include:

Create quality scientific reports that accurately and professionally communicate your results

Analyze and present experimental data graphically, cogently, and succinctly

Maintain a professional scientific notebook

Interpret and expand scientific protocols and experimental design
Use and optimize instrumentation for data collection
Describe various physical chemistry concepts
Evaluate models for explaining experimental results

Illness & Make-up Policies

1. If you are experiencing COVID-19 symptoms, have tested positive for COVID-19, or are otherwise sick, do not attend in-lab experiments and inform your instructor that you will not be able to attend the planned in-lab activity. If you arrive to lab with visible signs of an active illness you will be asked to leave.
2. If you are forced to miss a lab, please contact the instructor as soon as possible to begin the process of scheduling a make-up.
3. If you are forced to miss multiple weeks, you should contact the UF Disability Resource Center (DRC)

General Expectations:

It is your responsibility to come prepared each week. The specific requirements will be unique for each experiment, which means you will need to attend the weekly lecture and read the material provided online in order to know what is expected of you.

All wet lab experiments require pre-lab notebook activities that will be graded as on-line submissions.

Proper attire is required for each lab period. Closed toed shoes, safety goggles, no tank tops and no shorts. At the beginning of each lab, your TAs will check for proper clothing. If you do not follow the expected safety guidelines, they will turn you away.

Contact your instructors and TAs in advance of any anticipated absences so alternative scheduling can be made.

Lab Safety

Safety glasses must be worn at all times in the laboratory. Wear long-legged clothes to protect your skin against spills or bring a lab "kittel." Closed-toed shoes are mandatory. Remove all pendant jewelry when working in the lab. If you have long hair, you may not let it hang loose but should tuck it away safely so that it doesn't present a potential hazard for you. Refer to the [ACS safety manual](#), which regulates all safety procedures in the lab. Being prepared is an important aspect of safety.

Ethics

Students are expected to conduct themselves professionally in this course. This includes following the UF Honor Code (see below) and a complete understanding of academic integrity. Plagiarism and data fabrication will not be tolerated.

Absences and Tardiness

Excused absences are allowed in accordance with UF policy. If you are feeling ill or have received a positive test result for COVID-19, do not show up to in-person laboratory experiments and consult with your instructor on an appropriate course of actions.

Otherwise do not arrive late to your lab. Tardiness will lead to loss of points. Unexcused arrival more than 20 minutes late for a lab will result in the student not being admitted to the lab.

Late Submission Policy

Assignments received past posted due dates will receive a late penalty of 10% per day unless the late submission is approved through prior communication with course instructors. If something arises that prevents you from completing the assignment on time, contact the course instructors right away to request an extension.

Regrade policy

If you believe a mistake has been made on the grading, please notify the professor and your TA through Canvas within 1 week of receiving the grade. We will look at it and evaluate on a case-by-case basis.

University Policy on Accommodating Students with Disabilities

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

Course Grade Computation

Your letter grade will be derived from weighting the following components of your performance in the class:

	Percentage Points
Pre-lab and post-lab notebook	20%
Quizzes	10%
Literature Project	10%
Written Report Activities	60%
Total	100%

Your course grade will be determined from your total course performance percentage as follows:

100% -	94.0%	A
93.9% -	90.0%	A-
89.9% -	87.0%	B+
86.9% -	84.0%	B
83.9% -	80.0%	B-
79.9% -	77.0%	C+
76.9% -	74.0%	C
73.9% -	70.0%	C-
69.9% -	60.0%	D
59.9% -	0%	E

All grades will be posted in the Canvas GradeBook, as available. There is no “curving” grades for the class.

UF's Grading Policy: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

University Policy on Academic Misconduct

This class will operate under the policies of the student honor code which can be found at: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>. The students, instructor, and TAs are honor-bound to comply with the Honors Pledge: **We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.** You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."* It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks. Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>.

Semester Schedule

Week	Dates	Special Dates	Experiment (Thursday)
1	12-May - 18-May		heat capacity ratios
2	19-May - 25-May		conjugated dyes
3	26-May - 1-Jun	Holiday Mon 5/27	pKa
4	2-Jun - 8-Jun		pKa analysis
5	9-Jun - 15-Jun		rotation 1
6	16-Jun - 22-Jun	Holiday Wed 6/19	rotation 2
7	23-Jun - 29-Jun	Summer Break	
8	30-Jun - 6-Jul	Holiday Thurs 7/4	None
9	7-Jul - 13-Jul		rotation 3
10	14-Jul - 20-Jul		rotation 4
11	21-Jul - 27-Jul		rotation 5
12	28-Jul - 3-Aug		None
13	4-Aug - 10-Aug		None
14	11-Aug - 17-Aug	No Classes	

Rotation Experiments:

1. FTIR of carbon dioxide
2. Absorption and fluorescence of molecular iodine
3. EPR Spectra of transition metal complexes
4. Kinetics of photoisomerization kinetics
5. Planck's constant

Disclaimer for this document

Note: All aspects of course operations, including grading, course policy and policy execution, are subject to change at the discretion of the course instructor.

If you have further questions, please contact me. Have a great semester!

**Sincerely,
Adam Mansell**