CHM2096L: CHEM II LAB FOR ENG, SPRING 2025

CLASS #: 16561,16562, 16563, 16775, 18174, 20946

INSTRUCTOR INFORMATION

COURSE COORDINATOR

Instructor: Dr. Maria Korolev, Instructional Professor

Email (for administrative purposes): email via Canvas preferred; korolev@ufl.edu

Office hours: Mondays, Wednesdays, and Fridays 2:00pm – 3:30pm held in LEI 400

LAB MANAGERS

The lab manager is Candace Biggerstaff. She can be contacted via Canvas email.

TEACHING ASSISTANT

Your teaching assistant will be assigned during the first week of the semester. You will meet your teaching assistant during the first lab meeting and they will provide you with their contact information.

GENERAL INFORMATION

COURSE DELIVERY

This course will be delivered 100% face-to-face. All lab meetings will occur during your scheduled lab time. The schedule is subject to change and changes will be communicated via Canvas announcements.

MEETING TIMES

CHM2096L meets once per week in SFH 110 during your scheduled lab period. The meeting time can be found on your schedule on ONE.UF. You will enter the lab from the atrium in SFH once the lab managers let you in.

DESCRIPTION/GOALS

CHM2096L is designed to introduce you to common laboratory techniques and equipment used in the general chemistry and engineering laboratories, to help you gain understanding and proficiency in their use, and help you explore the process of doing experimental chemistry, and to illustrate representative examples of the useful and important concepts you are learning in the CHM2096 lecture. The course serves to teach the scientific method, skills for problem solving, general chemistry knowledge, and a connection to the principles that govern the natural world.

Specifically, students will be able to:

1. Apply the fundamental principles of kinetics, thermodynamics, and electrochemistry in the laboratory.
2. Demonstrate the proper use of laboratory equipment and experimental techniques.
3. Conduct laboratory experiments, both independently and in teams.
4. Design, construct, and interpret data tables and graphs accurately to communicate experimental data.
5. Clearly communicate in writing observations and conclusions using experimental findings and reasoning.
6. Safely handle, utilize, and dispose of chemicals, and identify chemical hazards and risks.
7. Apply the principles of the engineering design process to solve engineering problems.

FIRST DAY OF LAB

Your first in-person lab meeting will be the week of January 27th, but you have assignments due the week prior. The first deadline for online assignments is January 24th at 11:59pm - check Canvas for details. During your first lab meeting, you will meet your TA and fellow classmates, and complete the first lab activity. You will not be allowed to enter lab without proper safety attire, including approved eye protection. Prior to attending each lab period, you must familiarize yourself with the lab background and procedure, and complete the pre-lab quiz and submit your pre-lab notebook online. Pre-lab assignments will be due at 8:00am on your scheduled lab day. During the lab meeting, you will work on performing the lab and completing all post-lab assignments. Your lab workstation is equipped with a computer on which you can access all of the lab materials including the procedures and supplementary information. Your attendance will be recorded during the lab period. After the lab period, you will submit your post-lab assignments online to be graded. Post-lab assignments will be due at 11:59pm on the day of your scheduled lab.

NETIQUETTE

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats. Please be mindful of your comments and responses, and make sure that they are respectful and inclusive to all participants.

COURSE REQUIREMENTS

REQUISITES

Requisite information and credit suitability can be found in the Undergraduate Catalog.

REQUIRED MATERIALS & FEES

You will require: a computer with an internet connection and Excel, a suitable laboratory notebook such as a standard composition notebook, proper attire, and department approved safety glasses or goggles. See the safety glasses requirements at https://otl.chem.ufl.edu/safety-glasses/. Additional course fee: $35.54.

GOGGLES AND ATTIRE

You must be wearing department approved safety glasses or goggles and be properly attired to be admitted to the laboratory at all times, including on the first day of lab. Proper attire includes: a loose-fitting shirt that covers the entire torso and shoulders, loose-fitting pants (not leggings) that cover the entire leg without any holes or rips, and closed-toed shoes that cover the entire foot. Anyone without safety glasses, or who is inappropriately attired, will not be allowed into the lab. Additionally, no gum chewing or headphones will be allowed. If you are asked to leave the lab due to improper attire, you will not be permitted a makeup. You can leave and return if it is within 20 minutes of the start of the period.

LAB SAFETY

You are responsible for reviewing the safety information provided in Canvas. There are two safety quizzes and a safety contract that are included in the first assignments for the course. All of the activities worth credit for the course will be locked in Canvas until you satisfactorily complete the Safety Contract.

ATTENDANCE INFORMATION

LAB PERIOD

You are required to attend lab in-person during your scheduled lab period. If you are well-prepared, you

should not experience difficulties completing the experiments within the allotted timeframe and submitting lab assignments that day. You may not arrive early, stay late, or attend during a different lab period to complete your laboratory activities. If you are more than 20 minutes late and are marked absent by your TA or fail to submit the attendance quiz, you will not be allowed to enter lab and you forfeit your attendance points for the day. Any student who has an unexcused absence will not be allowed to submit any post-lab assignments.

ABSENCES

Requirements for class attendance in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Excused absences are for extenuating circumstances only: documented illness, family emergencies, or university approved absences. Travel, non-emergency doctor or dentist appointments, or extracurricular activities do not justify an excused absence. Missing lab due to improper lab attire does not qualify for an excused absence. Emailed requests to "preview" excused absences will be ignored; it should be clear what constitutes an excused absence.

Students who miss lab due to extreme circumstances beyond their control may submit an absence request form within 7 days of the missed deadline. To have a request considered for approval, you must (1) complete an Absence Request Form on Canvas; and (2) provide documentation by either attaching a doctor's note (if due to illness) or request an excuse note from the Dean of Students Office if due to a family emergency. Pre-lab assignments are due as scheduled unless the excuse note extends for two days prior to the due date. Students who miss lab (excused or unexcused) are responsible for the material of the lab.

Any student who misses more than 2 lab sessions (excluding religious observances, disability related absences, or military leave), whether excused or unexcused, will receive a grade of E in the course.

LAB SCHEDULE (SUBJECT TO CHANGE)

Students will begin meeting for lab the week of January 27th, but there are online assignments due the week prior. This lab schedule is subject to change - students should keep their schedule free so that they are available during their scheduled lab meeting time every week. Flex days may be used if regularly scheduled lab days need to be rescheduled. Changes will be communicated via Canvas announcements.

DATES	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
Jan. 13 – Jan. 17	No Labs			
Jan. 20 – Jan. 24	No Labs - First Online Assignments due January 24th			
Jan. 27 – Jan. 31	DC0: Manage the Nitrogen Cycle: Intro Lab			
Feb. 3 – Feb. 7	DC1: Engineer Better Medicines: Design Phase			
Feb. 10 – Feb. 14	DC1: Engineer Better Medicines: Conduct Phase			
Feb. 17 – Feb. 21	DC1: Engineer Better Medicines: Analyze Phase			
Feb. 24 – Feb. 28	DC2: Engineer the Tools of Scientific Discovery: Design Phase			
Mar. 3 – Mar. 7	DC2: Engineer the Tools of Scientific Discovery: Conduct Phase			
Mar. 10 – Mar. 14	DC2: Engineer the Tools of Scientific Discovery: Analyze Phase			
Mar. 17 – Mar. 21	No Labs - Spring Break			
Mar. 24 – Mar. 28	Lab Practical			
Mar. 31 – Apr. 4	DC3: Restore and Improve Urban Infrastructure: Design Phase			
Apr. 7 – Apr. 11	DC3: Restore and Improve Urban Infrastructure: Conduct Phase			
Apr. 14 – Apr. 18	DC3: Restore and Improve Urban Infrastructure: Analyze Phase			
Apr. 21 – Apr. 25	Flex Days			
Apr. 28 – May 2	Final Lab Exam April 30th 12:30pm-2:30pm			

GRADING

DEADLINES AND LATE POLICY

The first assignments for the course are due online on January 24th at 11:59pm. The remaining lab activities will be locked on Canvas until the safety contract is completed. If you miss any assignments due to not completing the contract, you will forfeit the grades.

You will have a partner for lab, but all assignments are completed individually, and submitted and graded individually. Each student must submit each required assignment to receive a grade. While you collect data, make observations, and work on activities with your partner, it is required that you submit your own work. Do not submit a copy of your lab partner's graph, for example; this is considered copying and is in violation of the Honor Code. All Honor Code violations are reported.

Each week you will have pre-lab assignments and post-lab assignments. The pre-lab assignments will be due at 8:00am the day of your scheduled lab period. All other lab-related assignments are due by 11:59 pm the day of your scheduled lab period. All deadlines are in EST.

Pre-lab assignments cannot be completed late for any credit. For best performance, use only Firefox or Chrome for quizzes. Make sure you start well in advance of the deadline in case your computer's clock differs from official Canvas time. Post-lab assignments that are submitted late will be deducted 25% credit per day that they are late. The penalty is applied even if the submission is received by Canvas one second past the 11:59pm deadline, so be mindful of time. Emailed assignments are not considered for grading.

We highly recommend you submit assignments early and verify they've been submitted through Canvas. We do not recommend using the Canvas App to submit assignments - use a web browser to avoid issues. If you encounter technical issues, you can contact the Help Desk at 352-392-4357.
For extensions due to illness/emergency, a Dean of Students note must be provided for at least the 2 days prior to the assignment's deadline for accommodations to be considered. Extensions will not be given because of technical or personal issues that occur within 24 hours of the assignment deadline.

ASSIGNMENT DESCRIPTIONS

Syllabus Quizzes are designed to assess your knowledge of the content of the course syllabus. The syllabus does contain a lot of information, and you can refer to the syllabus when needed.

Safety Quizzes are designed to assess knowledge of safety terms, pictograms, and other safety information we cover each week. Also included in the 'Safety' category is the Safety Contract, which is an acknowledgement of general safety considerations for the lab, specific safety information related to our general chemistry lab, and familiarity with portions of the American Chemical Society's Guidelines for Chemical Laboratory Safety (a document is provided for you to review throughout the semester).

Pre-Lab Assignments include pre-lab quizzes and pre-lab notebook assignments. Pre-lab quizzes are designed to assess your knowledge of the background information for each lab activity. Questions include multiple-choice questions of content and calculation-based questions similar to those you will perform during or after the lab. Pre-Lab Notebook assignments are designed to assess your preparedness for each lab activity and familiarity with the safety of chemicals used, knowledge of procedural steps, or readiness otherwise (calculations performed, data looked up in a reference, etc.).

Attendance quizzes must be submitted from the laboratory workstation computers within the first 20 minutes of the lab period for full credit. Both the attendance quiz and attendance recorded by your TA are required to be able to submit post-lab assignments for each lab.

Post-Lab Assignments are .pdf scans of your laboratory notebook and any described spreadsheets/graphs. You can write more than is required in the grading rubric for each but each lab has specific requirements, so refer to the grading rubrics each week. You will record observations, make calculations, you may write abbreviated procedural steps, discuss sources of error, and make tables of data and sketch experimental set-ups in your notebook. You may also be required to submit a data spreadsheet or graph.

Surveys may be part of educational studies or may ask you about specific aspects of the course or for an evaluation of your TA near the end of the semester.

The **Lab Practical** is designed to assess your laboratory, graphing, and analytical skills. The lab practical is a timed and proctored individual assignment that you will complete during your regular lab period per the lab schedule. More details will be posted on Canvas, including the procedure for the lab practical.

FINAL LAB EXAM

The final lab exam will be administered during our assigned final exam time, Wednesday April 30th 12:30pm-2:30pm in computer rooms TBA. This is a timed and proctored exam that will assess skills that you have used throughout the semester.

Exam absences will be handled in accordance with official UF academic regulations. For more information, see https://catalog.ufl.edu/UGRD/academic-regulations/ . See below for further clarification for two different types of situations:

(1) Conflicts with other events: this should be rare, as the final exam is during the registrar scheduled lab period. Such reasons may include religious holidays, military obligations, special curricular requirements (e.g., attending professional conferences), or participation in official UF-sanctioned activities such as athletic competitions, etc. For more information on such absences see the official UF Policy at https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#absencestext). If you must be absent for an exam due to a documented and approved conflict known in advance, you must e-mail your instructor (within Canvas) the documentation at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you.

(2) Missing an exam due to an emergency or sudden illness: If you are absent for an exam due to an unpredicted documented medical reason or family emergency, you must contact the instructor as soon as possible, and you may be asked to have your excuse verified by the Dean of Students Office (DSO). Your instructor will follow UF academic regulations in evaluating the notification and/or documentation received from you or from the DSO on your behalf. Once your instructor is satisfied with the validity of your exam absence a make-up exam will be scheduled after a reasonable amount of time, i.e., before the end of the semester. If your documentation is deemed insufficient to excuse your absence you will receive a zero on the missed exam.

Exams taken at any other time than the regularly scheduled exam time have different questions that assess the same material at a comparable level of difficulty. Students are not able to review these exams until after the semester has concluded.

GRADE BREAKDOWN

Each laboratory exercise is comprised of a Pre-Lab quiz, a Pre-Lab Notebook grade, a Post-Notebook grade, a Post-Lab exercise, and various other assignments specific to that lab. Each lab exercise as a whole is weighted equally to your final grade. Within each lab exercise, assignments are weighted according to the published point value. If there is any confusion about this, please see the instructor. Detailed information regarding each of these grading items is provided in Canvas. Assignment weights are as follows:

Assignment Group	Weight %
Safety/Syllabus/Surveys	5%
Attendance Quizzes	5%
Pre-Lab Assignments	25%
Post-Lab Assignments	35%
Lab Practical	15%
Final Lab Exam	15%

Grade scale (note: there is no rounding to your score in Canvas):

Letter	A	A−	B+	B	B−	C+	C	D+	D	D−	E
Cutoff	≥93.0	≥90.0	≥86.0	≥83.0	≥80.0	≥76.0	≥70.0	≥66.0	≥63.0	≥60.0	<60.0

RE-GRADES

All lab assignment grades are graded by your TA so you should communicate any lab notebook grade disputes to your TA. Your TA will address your concerns at that time and make any necessary corrections. If your TA finds it necessary to re-grade your lab notebook, he/she will correct the grade on your notebook and on his/her grade sheet immediately. The notebook must be scanned and submitted to Canvas to the relevant assignment in order for points to be considered toward your course grade. Most assignments must be submitted in .pdf format to be accepted.

If a blank document is submitted to Canvas or no document is submitted, the assignment will earn a grade of 0. Incomplete files are graded as received according to the grading rubric. Technical issues are the students' responsibility, so it is recommended that you check your submission when you upload it on Canvas and contact the UF Help Desk if needed, in advance of the deadline. Students are not permitted to resubmit an assignment after grading for a revised grade.

Please note that all manual grades are tentative for 3 weeks from grading until reviewed by the head TA and/or instructor for adherence with course policy and the grading rubrics. Any grade changes will be communicated accordingly.

EDUCATIONAL RESEARCH STUDY

This semester, CHM2096L is part of a chemical education research study within the Department of Chemistry and the College of Education at UF, investigating persistence in STEM fields among students enrolled in our undergraduate lab courses. The study includes three main surveys, the first of which includes an Informed Consent question. The study also includes weekly post-lab exit surveys.

To participate in the study, students will agree to the Informed Consent Form as part of the first research survey by the survey due date. If you do not wish to participate in the study and have your survey data removed from the collected data, you still must complete the surveys. We do ask you to participate in the study since the data collected may prove valuable. Please note that you will have to complete all surveys prior to their due dates to earn a portion of your course grade; these surveys are included in the Survey category in your gradebook. Participation in the study does not influence your course grade in any way.

SAMPLE GRADING RUBRICS

DC0 Pre-Lab Notebook Criteria	**Pts**

All preliminary questions are appropriately answered	2
Student lists all materials used in the experiment	1
Student shows calculations for preparing the serial dilutions in the procedure	2

DC0 Post-Lab Graph Criteria	**Pts**
Student uploads two graphs of absorbance and % transmittance vs concentration.	2
Graphs contain title, axis labels, and equations with R^2 value.	3

DC0 Post-Lab Notebook Criteria	**Pts**
Student records their micropipette data in an organized table	1
Wavelength is recorded and its value is justified	1
Absorbance and % Transmittance Data is recorded for all standard solutions and the unknown solution	2
Student shows calculations for determining the concentration of the unknown water sample	3
Student answers the design challenge in the form of Claim, Evidence, and Reasoning	2
All information is legible, organized, and labeled. Names of lab partners are included.	1

UNIVERSITY POLICIES

STUDENTS REQUIRING ACCOMMODATIONS

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting disability.ufl.edu/students/get-started. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

ACADEMIC MISCONDUCT

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following 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 (e.g. assignments, papers, quizzes, exams). 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://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/."

U MATTER, WE CARE

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing Staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

GETTING HELP WITH CANVAS

For issues with or technical difficulties with Canvas, contact the UF Help Desk: (352)-392-HELP or https://lss.at.ufl.edu/help.shtml;

EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

INCLUSIVE LEARNING ENVIRONMENT

We embrace the University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinion or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." We are committed to fostering an open and inclusive classroom and laboratory environment in our College, where every student, guest instructor and contributor feels valued. If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office on Multicultural & Diversity Affairs Website: http://www.multicultural.ufl.edu/

CONFLICTS

If you experience issues with the course that you cannot resolve with your TA, please contact Dr. Korolev by email or in-person. Don't wait until the end of term to resolve an ongoing issue.

DISCLAIMER

This syllabus represents my current plans and objectives. If those need to change as the semester progresses, which is not unlikely, then the changes will be communicated to the class clearly.