

# CHM2046L GEN CHEM II LAB, FALL 2023

## INSTRUCTOR INFORMATION

### COURSE COORDINATOR

Instructor	Email	Phone	Office Hours
Dr. Korolev	Email via Canvas preferred korolev@ufl.edu	352-392-1087 (email preferred)	Virtual office hours available by appointment

### LAB MANAGERS

The lab managers are Candace Biggerstaff and Jacob McCartney. They can be contacted via Canvas email.

### TEACHING ASSISTANTS

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 TIME/LOCATION

CHM2046L 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

As both a general education requirement and major's course, CHM2046L is designed to introduce you to common laboratory techniques and equipment used in the general chemistry laboratory, 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 CHM2046 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.

### FIRST DAY OF LAB

Your first in-person lab meeting will be the week of September 5<sup>th</sup> (Monday students will begin September 11<sup>th</sup>) but you have assignments due the week prior. The first deadline for online assignments is Sept 1<sup>st</sup> 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 assignments. 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 lab assignments. Your lab workstation is equipped with a computer on which you can access all of the lab materials including the procedure. If you are marked absent by your TA or fail to complete the attendance quiz during the allotted time at the start of lab you are not permitted to turn in the post lab assignments and forfeit the grades. During-lab assignments (any graphs or pictures assigned) must be submitted before the end of the lab period. Post-lab notebooks are due online at 11:59pm the day of your scheduled lab.

## 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, and department approved safety glasses or goggles. See the safety glasses requirements at <https://otl.chem.ufl.edu/safety-glasses/> Course Fee: \$45.00

### 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. 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 to change attire and return as long as it is within 15 minutes of the start of the period.

### LAB SAFETY

You are responsible for reviewing the safety information provided in Canvas. All of the activities worth credit for the course will be locked in Canvas until you satisfactorily complete the Safety Contract.

## LAB SCHEDULE (SUBJECT TO CHANGE)

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. Schedule changes will be communicated via Canvas announcements; it is students' responsibility to read the Canvas announcements and follow the provided information.

DATES	Monday	Tuesday	Wednesday	Thursday
Aug 21 - Aug 25	No Labs			
Aug 28 - Sep 1	No Labs - First Online Assignments due Sep 1 <sup>st</sup> at 11:59pm			
Sep 4 - Sep 8	Holiday - No Labs	Beer's Law Lab		
Sep 11 - Sep 15	Beer's Law Lab	Radioactivity/Kinetics Lab		
Sep 18 - Sep 22	Equilibrium Constant Lab			
Sep 25 - Sep 29	Le Chatelier Lab			
Oct 2 - Oct 6	Acids & Bases Lab			
Oct 9 - Oct 13	Titrations Lab			
Oct 16 - Oct 20	Kinetics Lab	Flex Days		
Oct 23 - Oct 27	Thermodynamics Lab			
Oct 30 - Nov 3	Lab Practical			
Nov 6 - Nov 10	Galvanic Cells Lab			
Nov 13 - Nov 17	Electrolytic Cells Lab			
Nov 20 - Nov 24	No Labs		Holiday - No labs	
Nov 27 - Dec 1	Transition Metals Lab			
Dec 4 - Dec 8	Flex Days			
Dec 11 - Dec 15	Final Lab Exam on Wednesday, December 13 <sup>th</sup> from 12:30pm-2:30pm			

## 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 post-lab assignments that day. If you are marked absent by your TA or fail to complete the attendance quiz during the allotted time at the start of lab you are not permitted to turn in the post lab assignments and forfeit the grades. If you are more than 15 minutes late, you will not be allowed to enter lab and you will be considered absent. Any student who has an unexcused absence will not be allowed to submit any during- or post-lab assignments.

### ABSENCES

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. Absences due to makeup exams for other courses will not be considered excused.

Students who miss lab due to extreme circumstances beyond their control may submit a request for a makeup lab within 7 days of the missed deadline. To have a request considered for approval, you must (1) complete the Absence Request Form on Canvas; and (2) provide documentation by either attaching a doctor’s note to the form (if due to illness) or request an excuse note from the Dean of Students Office (if due to a family emergency). Requirements for class attendance and make-ups in this course are consistent with university policies that can be found in the [Undergraduate Catalog](#). Any student who misses more than 2 lab sessions (excluding religious observances, disability related absences, military leave, or extreme circumstances), whether excused or unexcused, will receive a grade of E in the course.

For pre-lab 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.

## GRADING

### DEADLINES AND LATE POLICY

The first assignments for the course are due online on Sep 1<sup>st</sup> 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.

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. During lab assignments (pictures or graphs assigned) are due by the end of your lab period and must be submitted from your lab workstation. Note that if your lab group finishes the lab activity and departs lab, you will not be permitted reentry into the lab. Post-lab assignments are due by 11:59 pm the day of your scheduled lab period. All deadlines are in EST.

Pre-lab and During-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 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 advise against 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.

## GRADE BREAKDOWN

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

Assignment Group	Weight %
Safety/Syllabus/Surveys	5%
Lab Assignments (10 labs @ 6.5% each)	65%
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

## LAB PRACTICAL

Part of your course grade will be based on your performance on the Lab Practical. This is a timed and proctored in-lab assignment that is scheduled during one of your regular lab periods following the lab schedule. You will complete the lab practical individually and it will assess skills that you have used throughout the semester. More details regarding the lab practical will be posted on Canvas in advance of the lab practical date.

Absences will be handled in accordance with official UF academic regulations. For more information, see <https://catalog.ufl.edu/UGRD/academic-regulations/>. 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 absence a make-up lab practical 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 lab practical.

## FINAL LAB EXAM

A multiple-choice lab exam will be administered during our assigned final exam time on Wednesday, December 13<sup>th</sup> from 12:30pm-2:30pm, in rooms TBA. The exam is a cumulative final exam that covers everything in the lab manual (the modules in Canvas).

Bubbling errors will not be negotiated. A 5 point penalty will be applied for failure to bubble in a UFID correctly or not taking the exam in the assigned room. A 30 point penalty will be applied for failure to bubble in a form code or the wrong form code or for using a writing implement that cannot be scanned (e.g. a pen).

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: 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/#absencetext> ). 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 (before the regularly scheduled exam date/time).

(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.

## 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.

Regrades of assignments submitted through Canvas, typically via file upload, must be requested within 7 days of a grade being assigned, and should be directed to your TA. If there was a technical issue with the file that was submitted on Canvas, the file can be resubmitted via the comments section to be regraded, but the assignment will suffer a 50% penalty. Technical issues are the student's responsibility so it is recommended that you check your submission when you upload it on Canvas.

## EDUCATIONAL RESEARCH STUDY

This semester, CHM2046L 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 surveys, the first of which includes an Informed Consent question.

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 three 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 three 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 does not influence your course grade in any way.

## CONFLICTS

If you experience issues with CHM2046L that you cannot resolve with your TA, please contact Dr. Korolev via Canvas email or in-person. Don't wait until the end of term to resolve an ongoing issue.

## UNIVERSITY POLICIES

### 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 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.

### 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/>

### 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: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>."

### CAMPUS RESOURCES

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the [Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [Student Health Care Center website](#).

University Police Department: Visit [UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center website](#).

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

## ACADEMIC RESOURCES

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

[Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

[Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.

[Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

[Writing Studio](#): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the [Student Honor Code and Student Conduct Code webpage](#) for more information.

On-Line Students Complaints: View the [Distance Learning Student Complaint Process](#).

## 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/>.

## 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.

## GENERAL EDUCATION OBJECTIVES & OUTCOMES

Primary General Education Designation: Physical Sciences (P) ([area objectives available here](#))

A minimum grade of C is required for general education credit. Courses intended to satisfy the general education requirement cannot be taken S/U.



Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

In CHM2046L, these objectives will be met in a variety of ways detailed below.

At the end of this course, students will be expected to have achieved the following learning outcomes in content, communication, and critical thinking:

**Content:** *Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline.* Students will acquire a basic knowledge of a variety of chemistry concepts and discipline specific terminology, including nomenclature, classification of reaction types, terminology related to the periodic table, and that used to describe energetics of reactions. Students acquire practical lab skills including safe handling of equipment, materials, and chemicals in the lab, and safe handling of laboratory waste, including hazardous waste. Achievement of this learning outcome will be assessed through quizzes, laboratory assignments, designated safety assignments, and the final lab exam.

**Communication:** *Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.* Students participate in discussion with other students and their TA/instructor throughout the semester. Students respond to prompts in writing in their laboratory notebooks. Students sketch diagrams of various forms, and draw chemical structures. Achievement of this learning outcome is assessed through student laboratory notebooks and related laboratory assignments, and the final lab exam and quizzes.

**Critical Thinking:** *Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems.* Students formulate and express hypotheses and use logic and reasoning to reflect on laboratory exercises. Students refer to scientific literature and databases and make inferences based upon experimental data. Achievement of this learning outcome is assessed by laboratory assignments, quizzes, and the final lab exam.

A complete list of student learning outcomes is posted in Canvas, organized by laboratory experiment.

## 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.