

CHM2046L – General Chemistry II Lab for Engineers – Spring 2019

Instructor: Dr. Maria Korolev

Email (for administrative purposes): Email through Canvas

Office hours: Mondays, Wednesdays, and Thursdays 2:15pm-3:30pm in Keene-Flint 251/258

Lab Managers: Donna Turner and Candace Biggerstaff (located in the stockroom of JHH 110)

Teaching Assistant: To be assigned during first laboratory meeting; a full list of sections and corresponding TAs, as well as their contact information, will be posted on the Syllabus page in Canvas.

Meeting times: CHM2045L meets weekly in JHH110. The time can be found on your schedule in ONE.UF.

Course Objectives: The general objectives of this course are to introduce you to common laboratory techniques and equipment used in a laboratory, to help you gain understanding and proficiency in their use, to help you explore the process of doing experimental chemistry, and to illustrate representative examples of the useful and important topics you are learning in CHM2046/CHM2096 lectures.

Course Information: Some sections of CHM2046L are specific sections targeted to students who are engineering majors. These sections of CHM2046L contain three-week long laboratory projects that apply chemistry principles to engineering problems. These sections of CHM2046L satisfy the same requirements as traditional sections of CHM2046L.

Required Materials: Approved safety goggles/glasses, proper attire, and a laboratory notebook. Information regarding approved safety goggles/glasses can be found on the Canvas course site.

Safety: You are responsible for reviewing the safety information provided on Canvas. All of the activities worth credit for the course will be locked in Canvas until you complete the Safety Contract. You can also find the lab attire, including approved eye protection, requirements on Canvas. You will be asked to leave the lab if not properly attired. If you are asked to leave the lab due to improper attire, you will not be permitted a makeup. You can, however, leave and return during the lab period as long as it is within 30 minutes of the start of the period.

First Day of Lab: Lab will start meeting on January 22nd, but you have assignments due online before this date. The first deadline for online assignments is January 18th – check Canvas for details. On the first day of lab, you will meet your TA and be assigned to your laboratory workstation. You will undergo safety training/orientation and complete a lab activity. You will not be allowed to enter lab unless you are dressed in proper lab attire, including eye protection, and have completed the online safety contract. Prior to attending each lab period, you must familiarize yourself with the lab background and procedure and complete the pre-lab quiz. In lab, each workstation is equipped with a monitor that allows access to eLearning to view the lab documentation, and to UF Apps.

Lab Schedule (subject to change):

Dates	Lab
January 8	No lab
January 15	No lab
January 22	DC00: Manage the Nitrogen Cycle
January 29	DC4: Engineer Better Medicines: Design Phase
February 5	DC4: Engineer Better Medicines: Conduct Phase
February 12	DC4: Engineer Better Medicines: Analyze Phase
February 19	DC5: Engineer the Tools of Scientific Discovery: Design Phase
February 26	DC5: Engineer the Tools of Scientific Discovery: Conduct Phase
March 5	No lab - Spring Break
March 12	DC5: Engineer the Tools of Scientific Discovery: Analyze Phase
March 19	DC6: Restore and Improve Urban Infrastructure: Design Phase
March 26	DC6: Restore and Improve Urban Infrastructure: Conduct phase
April 2	DC6: Restore and Improve Urban Infrastructure: Analyze Phase
April 9	No lab
April 16	Make up week
April 23	No lab

Grading:

Grades for the term will be determined as follows:

Category:	Lab Notebooks	Pre-Lab Quizzes	Safety/Syllabus	Surveys
Weight:	70%	20%	5%	5%

The following grade cutoffs will be used:

A	A-	B+	B	B-	C+	C	D+	D	D-	E
≥92%	≥88%	≥84%	≥80%	≥76%	≥72%	≥68%	≥64%	≥60%	≥56%	<60%

Information on current UF grading policies for assigning grade points can be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Lab Notebook: During lab meeting time, students will work in teams on the lab assignment for that day. Teams will complete a lab notebook that will be uploaded and graded through Canvas (all students must upload this lab notebook individually). The lab notebook assignments are due by 11:59pm the day of the lab period. They must be received on Canvas; emailed assignments are not considered for grading. If you have personal computer issues, you should contact the UF Help Desk or use computers on campus. Assignments that are submitted late, within one day of the deadline, will be graded for ½ credit. Students who have an unexcused absence will receive a zero for the day's notebook assignment.

Regrades: All lab assignment grades are graded by your TA so you should communicate any lab notebook grade disputes to your TA. Regrades of assignments submitted through Canvas must be requested within 7 days of a grade being assigned. 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.

Pre-Lab Quizzes: Pre-lab quizzes are due at 8am the day of a student's scheduled lab period. Quizzes cannot be completed late for any credit. The lowest pre-lab quiz grade for the semester will be dropped.

Surveys: The lab activities in the engineering sections of CHM2046L are part of an initiative to improve this section of general chemistry lab, and are tied to a research grant. Due to this, you will need to complete a consent form as well as respond to pre- and post-semester surveys. Your compliance with the surveys will be worth points that contribute to your overall lab grade.

Attendance: Attendance in the general chemistry laboratory is critical for this course. Your TA will take careful attendance each period while circulating the lab during the lab period. You must sign your name on the attendance sheet during each lab period – this is your responsibility. The signed attendance sheet is the official attendance record, not your individual notebook. Students who are more than 30 minutes late will not be permitted to perform the lab. If you are more than 30 minutes late for an extreme circumstance beyond your control, you may submit a request for a make-up (see the absences policy).

Absences: Students who must miss lab due to extreme circumstances beyond their control may submit a request for a make-up lab within 7 days of the missed lab period. Make ups for the absences for the last scheduled lab must be requested prior to make-up week to ensure scheduling.

Please understand that personal issues with scheduling conflicts, such as volunteering, work, non-emergency dentist or doctor appointments, extracurricular activities, or travel, do not justify an excused absence. To have a request considered for approval, you must (1) provide a completed request form (found on Canvas) via email to your coordinator (Dr. Korolev) through Canvas; and (2) request an excuse note from the Dean of Students Office if missing lab due to illness or emergency. After one week, the absence will be considered unexcused and you will receive a score of 0 and not be permitted a make-up.

Emailed requests to “preview” excused absences will be ignored; it should be very clear what constitutes an excused absence. If you know in advance that you will need to miss a lab session, please submit your request as early as you can, even in advance. 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 three lab sessions (excluding religious observances), whether excused or unexcused, will receive a grade of E in the course.

Honor Code: UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Canvas (<http://elearning.ufl.edu>): Here you will find the syllabus, gradebook, files, class announcements, and other pertinent info for the course. It is your responsibility to check Canvas often to make sure that you do not miss important announcements and to ensure that your gradebook is accurate. For computer assistance, visit <http://helpdesk.ufl.edu/>.

Conflicts: If you experience issues with CHM2045L that you cannot resolve with your TA, please see Dr. Korolev in person. Don't wait until the end of term to resolve an ongoing issue.

Disability Accommodations: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <http://www.dso.ufl.edu/drc/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodations for quizzes or exams.

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.

Evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Specific Goals of CHM2046L: You will be required to analyze scientific concepts and think critically. This means being able to answer both quantitative (mathematical) and conceptual (qualitative) problems in a limited period of time. Additionally, you will have to write and/or orally communicate during your scheduled lab periods. You will be required to utilize the methods of science as a logical means of problem solving through critical thinking. This means you must analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems. To ensure your competency in these concepts you will be required to complete quizzes and assignments that require critical thinking, analysis of problems, and drawing conclusions. Of particular importance in the lab course will be your ability to collect data, organize the data logically, generate a meaningful graphical representation of the collected data, and draw conclusions from the total exercise.

Physical Science General Education Requirements: 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.

These objectives are accomplished through participation in the lab sections, and individual work done on homework assignments and assessments.

General Education Student Learning Outcomes: The following learning outcomes will be assessed through online assessments and examinations.

Area	Institutional Definition	Institutional SLO
CONTENT	Content is knowledge of the concepts, principles, terminology and methodologies used within the discipline.	Students demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.
COMMUNICATION	Communication is the development and expression of ideas in written and oral forms.	Students communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.
CRITICAL THINKING	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.

Disclaimer: This syllabus represents my current plans and objectives. If those need to change as the semester progresses, then the changes will be communicated to the class clearly.