

CHM 2046 General Chemistry and Quantitative Analysis Spring 2020

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Lectures: T 12:50-2:45 PM (Periods 6-7), R 1:55-2:45 PM (Period 7) in CLB C130

Office hours: LEI 328, T and R 11 AM-12 PM, W 11:30 AM-12:30 PM, and by appointment.

Teaching Assistants: Alex Demidov, Cody Layne, and Kaylee Todd

Please email through Canvas only

Objective:

To introduce general chemistry concepts and problem-solving skills and their relationship to advanced topics in science and engineering.

Textbook:

Recommended text: Chemistry: The Molecular Nature of Matter and Change (6th edition), by Martin Silberberg, McGraw Hill

Alternatives: Any other edition of the Silberberg book, also available as a Smartbook. Any comprehensive General Chemistry textbook.

e-Learning:

We will use the Canvas e-learning site to provide other class materials, convey announcements and track grades. You can find this at <http://elearning.ufl.edu>.

Chemistry Learning Center (CLC):

Flint Hall 257. Tutoring (free) from graduate student TAs is available in the CLC Monday-Friday, normally continuously from periods 2-9. In addition, TAs assigned to this class section will hold office hours in the CLC. Office hours will be posted the first week of classes.

Suggested Readings and Homework:

Detailed agendas, including topics to be covered, suggested reading, and suggested practice questions and problems will be provided approximately every two weeks. These agendas will also announce the range of material to be included on each quiz and test. Answers to the homework problems will be posted on the Canvas site. Homework will not be graded, but quizzes and some questions on tests will closely follow assigned homework questions. Working on homework with a partner or in groups is strongly encouraged.

Discussion Sections:

Discussion sections will begin January 10. These discussion periods will be used for team worksheets, which earn points toward your course grade. Discussion sections also provide opportunity for questions and clarifications on homework problems, reading, and lecture content.

Topics and associated textbook chapters:

Equilibrium	Chapter 17
Acid-Base Equilibria	Chapter 18
Buffers and Acid-Base Titration	Chapter 19
Equilibria of Ionic Solids and Complex Ions	Chapter 19
Thermodynamics	Chapter 20
Electrochemistry	Chapter 21
Main Group Elements	Chapters 14, 22
Transition Metals	Chapter 23
Organic Chemistry/Polymers	Chapter 15

Tentative Schedule:

	Week	T 6-7	Th 7	Notes
Jan	6	Syllabus Ch. 17		
	13	Ch. 18		Quiz 1 Fri 1/17
	20		Ch. 19	
	27			
Feb	3		Ch. 20	Exam 1 Wed 2/5
	10			
	17		Ch. 21	Quiz 2 Fri 2/21
	24			
Mar	2	Spring Break		
	9			
	16	Ch. 14/22		Exam 2 Mon 3/16
	23			
	30	Ch. 23		Quiz 3 Fri 4/3
Apr	6		Ch. 15	
	13			Exam 3 Wed 4/15
	20	Polymers and You	Reading Day	
	Final	Final Exam: Saturday 4/25		10:00AM - 12:00PM

Tests and Quizzes:

Progress Test 1	Wednesday February 5 th , Evening Exam, room TBA
Progress Test 2	Monday March 16 th , Evening Exam, room TBA
Progress Test 3	Wednesday April 15 th , Evening Exam, room TBA
Quizzes on Homework	Friday, January 17 th , in discussion section Friday, February 21 st , in discussion section Friday, April 3 rd , in discussion section
Worksheets	All non-quiz Friday discussion sections
Final Exam (cumulative)	Saturday April 25 th , 10AM-12PM, room TBA

Scientific calculators are required for all quizzes and exams, but **only non-graphing, non-programmable calculators will be permitted**. Be sure to also bring pencils, section number and your UF ID card. No notes, papers, cell phones or other electronic devices can be in view during exams and quizzes.

Grading:

The final grade will be based on a total of 1000 points. The following anticipated grade cut-offs will not be raised: A(850), A-(820), B+(780), B(750), B-(720), C+(680), C(650), C-(620), D+(580), D(550), E(<550)

Progress Tests	500 points (two best scores plus ½ of lowest score)
Quizzes	150 points (3 x 50 points)
Worksheets	50 points (50 maximum out of possible 60)
<u>Final Exam</u>	<u>300 points</u>
Total	1000 possible points

Attendance:

CHM-2046 follows the *General Chemistry Exam Absence Policy*, posted on CANVAS. Briefly, attendance is required for all quizzes and tests. No makeup quizzes or exams will be given. Documented, anticipated absences for a scheduled UF academic or athletic conflicts should be brought to the instructor **at least one week prior** to the scheduled exam or quiz and an early conflict exam or quiz will be arranged. Unpredicted absences, such as a medically related absence, should be documented and brought to the instructor as soon as possible. Grades in these circumstances are explained in the *General Chemistry Exam Absence Policy*. In all cases, absences, to be considered, must be consistent with university policies, found in the online catalog:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Academic Honesty:

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 (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) 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.

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.

Accommodations for students with disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, 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 accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

UF grading policies for assigning grade points:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

UF Course Evaluation Process:

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 [GatorEvals](#). Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals or in their Canvas course menu under GatorEvals. Summaries of course evaluation results are available to <https://gatorevals.aa.ufl.edu/public-results/>.

General Education Credit:

This course is available for general education credit. This course introduces students to fundamental concepts of chemistry including bonding, atomic and molecular structure, chemical reactions, states of matter, reaction rates, chemical thermodynamics and equilibria. The scientific method and the place of chemistry in the everyday world are emphasized.

General Education Student Learning Outcomes:

The following learning outcomes (see table below) will be assessed through monitored Discussion Section worksheets, in-class quizzes, progress tests and a cumulative final examination.

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.