

Syllabus**CHM 2046****Spring 2017**

Lecture hours - Monday/Wednesday/Friday, Period 7

Instructor - Prof. Yunwei Charles Cao

Email - caouf@ufl.edu

Instructor's office - 226 Leigh Hall

Office hours - Wednesdays 2:50 to 3:55 PM

Text - "Chemistry: The Molecular Nature of Matter and Change," Silberberg 6th Ed

e-Learning: We use the Canvas e-Learning site to provide additional class materials, convey announcements and track grades.

Discussion Section - You must co-register for a Tuesday discussion section

Prerequisites - A grade of C or higher in CHM 2041 (or 2045) and CHM 2045L; Basic mathematic skills such as algebra and calculus.

Calculator - You must have your own scientific calculator; a graphing calculator or calculator that stores equations/data is not permitted. You will need your calculator for the quizzes and exams. Calculators will not be provided, and they may not be shared.

Course information - The Professor stresses that everything in CHM 2046 goes back to the foundations of chemistry comprised of one table and six core scientific fundamentals. Building up this foundation will not only lead to success in CHM 2046, but will help you understand yourself, the world around you, and life itself. You must attend all lectures, read the assigned text chapters, and work the homework problems. Self-discipline and open-minded learning are critical for this course.

Chapters covered and homework problems (Homework problems will be tested extensively in mini-quizzes during discussion sections)

Chap 16 - 1, 39, 40, 44, 69, 75, 82, 84, 90, 97, 108

Chap 17 - 1, 3, 5, 7, 14, 18, 23, 25, 27, 29, 33, 35, 41, 45, 49, 53, 58, 63, 65, 71, 78, 84

Chap 18 - 2, 5, 7, 9, 13, 15, 22, 23, 29, 36, 37, 40, 43, 49, 60, 63, 67, 71, 75, 82, 86, 92, 98, 107, 110, 117, 119, 127, 134, 137

Chap 19 - 2, 9, 13, 19, 23, 27, 31, 33, 38, 42, 44, 46, 52, 58, 63, 68, 74, 84, 86, 91, 97, 99, 110

Chap 20 - 2, 5, 16, 22, 28, 32, 33, 37, 46, 48, 50, 58, 60, 62, 72, 78, 83, 87, 89

Chap 21 - 1, 3, 8, 10, 12, 14, 25, 26, 29, 33, 36, 38, 40, 44, 48, 56, 60, 64, 72, 78, 87, 105, 118, 125

Important dates

Mini-Quiz 1	Tuesday, Jan. 10 - In Discussion Section
Mini-Quiz 2	Tuesday, Jan. 17 - In Discussion Section
Quiz 1	Friday, Jan. 20 - In Class
Exam 1	Tuesday, Jan. 31 - Periods E2 – E3, location TBA
Essay 1	Due on Monday, Feb. 6 - Submit to Canvas online
Mini-Quiz 3	Tuesday, Feb. 7 - In Discussion Section
Mini-Quiz 4	Tuesday, Feb. 14 - In Discussion Section
Quiz 2	Friday, Feb. 17 - In Class
Exam 2	Wednesday, Mar. 1 - Periods E2 – E3, location TBA
Spring Break	Mar. 4 – Mar. 11
Essay 2	Due on Monday, Mar. 13 - Submit to Canvas online
Mini-Quiz 5	Tuesday, Mar. 14 - In Discussion Section
Mini-Quiz 6	Tuesday, Mar. 21 - In Discussion Section
Quiz 3	Friday, Mar. 24 - In Class
Exam 3	Wednesday, Apr. 5 - Periods E2 – E3, location TBA
Essay 3	Due on Monday, Apr. 10 - submit to Canvas online
Mini-Quiz 7	Tuesday, Apr. 11 - In Discussion Section
Mini-Quiz 8	Tuesday, Apr. 18 - In Discussion Section
Last Class	Wednesday, Apr. 19
Final Exam	Monday, Apr. 25 - Period B, location TBA

Grading - You will be allowed to drop one exam (but not the final exam), one quiz, and two mini-quizzes. Grading will be based on 1000 earnable points as follows:

Mini-Quizzes – 6 best mini-quiz scores x 30 points per quiz	<u>180 points</u>
Quizzes - 2 best quiz scores x 85 points per quiz	<u>170 points</u>
Exams - 2 best exam scores x 200 points per exam	<u>400 points</u>
Final Exam (cumulative)	<u>250 points</u>
Total Earnable Points	<u>1000 points</u>

Point total & letter grade cutoffs – The following anticipated grade cutoffs will not be raised** (Each number is the lowest point total for the indicated grade): A = 850 points, A- = 820 points, B+ = 750 points, B = 720 points, B- = 700 points, C+ = 680 points, C = 650 points, C- = 620 points, D+ = 580 points, D = 550 points, E(<550).

Missed mini-quiz, quiz, or exam - Because you will be allowed to drop two mini-quizzes, one quiz and one exam, no makeups will be offered. However, if you have a sanctioned absence (religious observance, sanctioned sporting event, other UF exam for course with higher course number) - you will be allowed to take an exam or quiz (but no discussion-section mini-quizzes makeups) before, not after, the rest of the class. You must inform your TA and the Professor at least two weeks in advance of a sanctioned absence.

**** Grade Modification:** 15 bonus points from three optional essays (5 points each) can be used to raise your final grade. Optional essays are on a topic of “The Past, Present and Future of xx” (xx: one of the six core scientific fundamentals in this course, e.g., “*The Past, Present and*

Future of the Random Walk"). The minimum length is 1500 words excluding bibliography. Essays must be submitted online via Canvas before the deadline (the TA of your section will send you announcements on this matter).

The first essay (on either '[Random Walk](#)' or '[Le Chatelier's principle](#)') is due on [Feb. 6](#); the second essay (on either '[Concentration and pH](#)' or '[The First Law of Thermodynamics](#)') is due on [Mar. 13](#); and the third essay (on either '[The Second Law of Thermodynamics](#)' or '[Electrochemistry](#)') is due on [Apr. 10](#). The essays will be checked using "Turnitin.com". An essay submitted past the due date or with similarity in language of over 15% (excluding bibliography) will be automatically counted as zero.

Disputed grades - You have 48 hours after posting to dispute the score of a mini-quiz, quiz, progress exam, the final exam, or an optional assay. After that, all scores are final.

Getting help -In addition to your instructor's office hours, your discussion section TA will have office hours. Help is also available on a regular basis on the east side of the Chemistry Learning Center (CLC), which is in Flint Hall 257-258.

Policy on cheating -The only information that you can use on a mini-quiz, quiz or exam is information which is in your memory on that day. Bringing information into the exam in any other form - for example, a written "cheat sheet," information programmed into your calculator, information sent to you via cell phone, text, etc. – is cheating. Furthermore, simply having such illicit information in the test room is cheating. In addition, copying from a neighbor's test is cheating. Since there are many creative ways to cheat, I simply cannot define all of them in advance here. So the bottom line is – the instructor will define what is cheating, and any student caught cheating in any way will receive a score of zero on that quiz or exam. If a student receives a zero for cheating, that grade will not be eligible for dropping.

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.