

CHM 2046 – GENERAL CHEMISTRY II – FALL 2021

INSTRUCTOR INFORMATION:

Instructor: Dr. Anna Brajter-Toth

Email: atoth@chem.ufl.edu (for administrative purposes only)

Office Hours: TBA for in office and via Zoom; link to be posted on Canvas.

COURSE MEETING TIMES:

T 7th period (1:55 PM-2:45 PM) R 6-7th Period (12:50PM – 2:45 PM) CLB 130

Discussion Sections: Wednesdays, (synchronous to each section).

Please see your registered section for Discussion meeting time.

Course Delivery Method: This course will be delivered primarily in the classroom during the scheduled class meeting times listed above. Course content will be available on the CANVAS course shell. Required Discussion Sections meetings will occur via the Zoom platform during scheduled discussion period.

Please see your registered section for Discussion meeting time.

General Chemistry Policy Questions: For general questions regarding the General Chemistry program please contact genchem@chem.ufl.edu. Questions will be referred to your instructor if course/grade related.

IN-CLASS RECORDING

All recordings of this class are available on-line. Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

TA OFFICE HOURS & RESOURCES

TA Information: Office Hours of the teaching assistants in this class, including your own teaching assistant (TA), will be posted. You may see your own TA in this class during his/her office hours, no appointment necessary, or visit the office hours of any other TA for the course.

Additionally, there is the Broward Teaching Center <http://www.teachingcenter.ufl.edu> which offers resources for being successful in CHM2046.

GENERAL INFORMATION:

DESCRIPTION:

The second semester of the CHM 2045/CHM 2045L and CHM 2046/CHM 2046L sequence. Students who completed CHM 2045 or equivalent at another institution should consult a chemistry advisor before registering for this course. The course will cover topics including: Acids and bases, additional aspects of chemical equilibria, thermodynamics, electrochemistry, complex ions and descriptive chemistry.

PREREQUISITES:

CHM 2045 with a grade of C or better and [**MAC 1147** or (**MAC 1140** and **MAC 1114**)] or (MAC 2### or MAC 3### or MAC 4###). More information can be found via the [Undergraduate Catalog](#).

MATERIALS:

Required:

- **Chemistry Textbook:** Silberberg, 8th Edition, Chemistry, The Molecular Nature of Matter & Change (McGraw Hill), 2012. + any other college-level general chemistry books. There is an option to opt-in to the Silberberg 8th edition eBook for a discounted price via UF All Access for a limited time. <https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?TASK=INCLUDED>; for questions (code not working, refunds, etc.) please contact allaccess@bsd.ufl.edu
- **Non-graphic / non-programmable scientific** calculator.

Note: 8th Edition (Copies of the 8th ed. and solution manual are available in the Marston Science Library).

GRADES:

Grades for the term will be determined as follows:

3 Progress Exams (3 @ 200 pts each = 21.25% each)	63.75%
Final Cumulative Exam (200 pts)	21.25%
Online Homework (10 @ 5 pts each = 0.7% each)	7%
Quizzes (4 @ 5 pts each = 2%)	8%
TOTAL (870 points)	100%

The following **grade cutoffs** will be used (these are non-negotiable):

85-100% = A	82-84.9% = A-	78-81.9% = B+	75-77.9% = B	72-74.9% = B-
68-71.9% = C+	65-67.9% = C	62-64.9% = C-	58-61.9% = D+	55-57.9% = D
< 55.0% = E				

Posted grades: Should a student wish to dispute any grade received in this class, the dispute must be in writing and submitted to the course instructor within one week of the grade being posted to CANVAS. After one week has passed from when the grade was posted and the student was made aware of the posting of the grade(s) via an announcement on CANVAS, the instructor considers those grades final.

TENTATIVE SCHEDULE:

The following is a tentative schedule, subject to change as needed:

Module	Dates (T R)	Topic	Reading
1	Aug. 24, 26	Chemical Equilibrium	Chapter 17
2	Aug. 31; Sept 2 (Q1)	Chemical Equilibrium	Chapter 17
3	Sept. 7, 9	K_w & pH, Acids & Bases (A&B)	Chapter 18
3, 4	Sept. 14, 16 (Q2)	Buffers, Titrations	Chapter 19
4, 5	Sept. 21	Buffers, Lewis A & B, Solubility	Chapters 18, 19
Wednesday, September 22 – 8:20pm to 10:20pm – Exam 1			Chapters 17-18, 19
4, 5	Sept. 23	Buffers, Lewis A & B, Solubility	Chapters 18, 19
5 <i>contd</i>	Oct. 5, 7 (Q3)	Solubility, Acids & Bases	Chapter 18, 19
6	Oct. 12, 14	Thermodynamics, Redox Reactions	Chapter 20, 21
7	Oct. 19	Electrochemistry	Chapter 21
Wednesday, October 20 – 8:20pm to 10:20pm – Exam 2			Chapters 19-20, 21
7 <i>contd</i>	Oct. 21	Electrochemistry	Chapter 21
7, 8	Oct. 26, 28 (Q4)	Electrochemistry, Consumer Chemistry	Chapter 21, 22
8, 9	Nov. 2, 4	Transition Elements	Chapter 23
9, 10	Nov. 9, 11	Coordination Compounds	Chapter 23
10	Nov. 16, 18	Nonmetals	Chapter 14
11	Nov 23, (H), (H)	Review	Chapter 14

Thanksgiving Holiday (H)			
Monday, November 29– 8:20pm to 10:20pm – Exam 3			Chapters 14, 21-23
11contd	Nov. 30/Dec 2	Nonmetals	Chapter 15
11contd	Dec 7	Finish Up & Review	
Saturday, December 11– 10:00 am to 12:00pm – Final Exam			Cumulative

Note: In class we will work using Class Worksheets (CWs). The CWs are your best study tools. The CWs are available on CANVAS. It is recommended that you print the worksheets and use them to take your own lecture notes.

DISCUSSION SECTIONS

Discussions are on Wednesday for all sections and start the 2nd week of class. Attendance is required. Attendance records will be maintained in discussion. The discussion classes will include problem solving from homeworks (HW) and quizzes (Qs) and some new material. A Homework (HW) problem set will be available weekly on CANVAS. You will need to print it and complete it by hand. Completed HW is to be turned in before Wednesday discussion to your TA (except the weeks of major exams). Late HW is not accepted. Quizzes (Q) (four quizzes) will be available and will be posted as indicated in the preceding weekly schedule. You will need to print the Q and complete it by hand. The completed Q is to be turned in before the following Wednesday in discussion to your TA. This means that some weeks you will need to turn in the Q and the H. Late Qs are not accepted. The completed HWs and Qs are your great study tools.

Discussion sections will be held entirely via Zoom. More information will be available on CANVAS once classes begin. Zoom link info will be made available by the second week of classes in CANVAS.

HOMEWORK

A Homework (HW) problem set will be available weekly on CANVAS. The first HW set will be available the first week of class. You will need to print it and complete it by hand. Completed HW is to be turned in before Wednesday discussion to your TA (except the weeks of major exams). Late HW is not accepted. Instructions for submitting the HW are available on CANVAS. There will be no regular HW due the week after each major exam. You will get a grade for the returned completed HW. The grades for 10 HWs will count in your grade.

In addition, a number of recommended practice HW problems are posted on-line on CANVAS in each Module as the study tools. Additional practice end-of-chapter problems (EOC) are recommended in the posted HW. [Working class worksheet problems, on-line homework problems and end-of-chapter problems \(EOC\) is recommended as the primary study activity.](#) Solutions to the HW problems will be given in Discussions. Solutions to the recommended end-of-chapter problems are available on reserve in the library.

Grades for the HW will be posted each week. Your TA has to be alerted about HW grade adjustments within **ONE week** after the grades are posted on e-learning. Late adjustments will not be made.

QUIZZES

Quizzes (Q) (four quizzes) will be posted as indicated in the preceding weekly schedule. You will need to print the Q and complete it by hand. The completed Q is to be turned in before the following Wednesday discussion to your TA. Late Qs are not accepted. You will get a grade for all returned completed Qs. Grades for the Qs will be posted within a week. Your TA has to be alerted about Q grade adjustments within ONE week after the grades are posted on e-learning.

Those who complete and turn in on time all Qs and all HWs, and have a perfect attendance record in discussion, will get the maximum possible score for the HWs/Qs. Grade distributions are shown below. Late adjustments will not be made. Attendance records will be maintained in discussion.

EXAMS

Three evening midterm exams will be given from 8:20pm to 10:20pm (Eastern time) on the dates indicated on the preceding schedule. **Room assignments for the exams will be announced in class and on CANVAS.** Students are expected to plan their work and other activities so as to be available at these times. Exam questions will consist of questions similar to the CWs, HWs, Qs and problems recommended as the study tools. You will need a non-graphing non-programmable scientific calculator on exams, as well as pencils, your UFID card. Scratch paper will be provided.

Grades will be posted on e-learning as soon as available. Contact Dr. Toth by e-mail (atoth@chem.ufl.edu) about any errors you feel may have been made. For any grade adjustments of the midterm exams you will need to contact Dr. Toth by e-mail within ONE WEEK of the scheduled exam date.

EXAM ABSENCES

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: Acceptable reasons to miss a scheduled exam include conflicting evening exams in courses with higher course numbers, 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 (atoth@chem.ufl.edu) 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 (atoth@chem.ufl.edu) 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 by you or by 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.

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://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-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. If you have any questions or concerns, please consult with the instructor or TAs in this class.

CAMPUS RESOURCES

U Matter, We Care: If you or someone you know is in distress, please contact 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.

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. Once registered, students will receive an accommodation letter which must be presented to the instructor (Dr. Toth) when requesting accommodation (use CANVAS email). The student is responsible for scheduling the exam dates with the DRC. Students with disabilities should follow this procedure as early as possible. The DRC has 4 business day policy to submit Accommodated Testing Requests (ATRs).

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/>.

GENERAL EDUCATION CREDIT

A minimum grade of C is required for 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 HWks, 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.

DR. TOTH is available individually to all students in office hours. Yes, this is a huge course, but Dr. Toth does get to know you all **if you are in class and participate**. Much of the help you get will probably be from TAs. We all got into this business because we like to discuss chemistry. We also are concerned about your progress. We are available to discuss and advise you about any individual difficulties that might affect your ability to satisfactorily complete this course. Take advantage of the opportunities to meet and work with your instructors. We want you all to do well!

Letters of recommendation: If Dr. TOTH knows you, she can write a letter. Make yourself known!

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.