

CHM2046 GENERAL CHEMISTRY II UFO

SUMMER 2021, SECTION 16099

INSTRUCTOR INFORMATION

Instructor	Email	Office Location & Hours
Dr. Stacey-Ann Benjamin	Email in Canvas <u>only</u>	Virtual Office Hours via Zoom Wednesdays 11:00 am - 12:30 pm
Teaching Assistant		
Fanran Huang	Email in Canvas <u>only</u>	Virtual Office Hours via Zoom Thursdays 11:00 am - 12:00 pm

GENERAL INFORMATION

CREDITS/PREREQUISITES

3 credits. Prerequisites: a C or higher in CHM 2045 and MAC1147 or the equivalent. Students who completed CHM 2045 or equivalent at another institution should consult a chemistry advisor before registering for this course.

MEETING TIMES

This is a 100% online course. Virtual office hours (zoom conferences) will be scheduled at various times throughout the semester and can be made by appointment.

DESCRIPTION

CHM 2046 is the second semester of the CHM2045/CHM2045L and CHM2046/CHM2046L sequence. Kinetics review, Acids and bases, additional aspects of chemical equilibria, thermodynamics, electrochemistry, complex ions, nuclear chemistry, and introduction to organic chemistry. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

COURSE OBJECTIVES

As both a general education requirement and major's course CHM 2046 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 DAYS

Log into Canvas and access the course. You should check frequently for new *Announcements* and/or emails containing important information and reminders. Click on the *Syllabus* tab. Click on *Modules* and read all the information under the *Orientation* section as many of your questions are answered there.

COURSE MATERIALS

TEXTBOOK

Required: ALEKS 360, which includes the ebook: M. Silberberg, “Chemistry: The Molecular nature of Matter and Change with Advanced Topics,” 8th ed., McGraw-Hill, New York 2018. You’ll access the ALEKS HW for the course directly through Canvas; click on Modules, then ALEKS-Science to do so.

See the ALEKS page in Canvas in the Orientation Module for a walkthrough video for instructions on viewing the textbook and navigating within ALEKS.

The ALEKS platform has its own textbook, the ALEKSPEDIA; the textbook for this course, however, is the Silberberg book. We recommend solving end of chapter problems for practice as the course progresses.

CALCULATORS

A nonprogrammable, scientific calculator is required for this course. Calculators are allowed during exams but may NOT be shared. Graphing and programmable calculators are NOT permitted during exams. Cell phones and other electronic devices may NOT be used for calculations.

WEBCAM/MICROPHONE/SPEAKERS

You are required to have a functioning webcam, microphone, and speakers for proctored exams. See the technical requirements at www.proctoru.com. Verify that your operating system is compatible with ProctorU. (ProctorU currently does not support Chromebooks, for example.)

COURSE TECHNOLOGY

The student may require Adobe Acrobat Reader, Adobe Flash Player, Microsoft Silverlight and other software. You may wish to use Microsoft Excel or Word for written assignments. Free tutorials on many software applications can be found at Lynda.com. All UF students are expected to have reliable access to a computer, especially for an online course. ProctorU has specific hardware/software requirements: <http://www.proctoru.com/tech.php>. Check the support page for ALEKS for technical support using their platform: <https://mhedu.force.com/aleks/s/>.

COURSE COMMUNICATIONS

GENERAL QUESTIONS

General course questions should be posted to the General Help Forum in Canvas. The instructor response time is 24-48 h during the work week (expect to wait until Monday for questions posted on a Friday). Chapter-specific questions should be posted to the appropriate Study Room; participation in the Study Rooms is for credit.

I encourage you to post questions related to ALEKS homework or end of chapter questions you’re working on to the Study Rooms. The homework isn’t meant to be a test, it’s a learning tool. For the best response, take a screenshot of your question and/or the solution you propose. The more information you provide, the easier it is for your instructor/another student to help.

PRIVATE OR GRADE-RELATED QUESTIONS

Direct these to your instructor via the mail function in Canvas. Do not email outside of Canvas to your instructor's external email address - we aren't permitted to discuss grade related questions outside of Canvas. You will be asked to resend the query through Canvas.

COURSE POLICIES

QUIZZES

Sectional quizzes are delivered in Aleks. These quizzes are not proctored, but are timed, and are subject to the Honor Code. When you're ready to begin, simply click the link. You will have three attempts at each quiz, with the highest score counting for credit.

Graded quizzes can be completed late, with a late penalty of 50% up to four days late submission. Note that if a quiz is submitted even 1 s after the due date/time, the late penalty will apply.

Practice quizzes are provided in Canvas, and do not count for credit.

EXAMS

Three progress exams and one cumulative final exam are administered in Canvas. Due to the nature of this course's content, the topics tested on each progressive exam are cumulative so questions may include previously covered concepts which the student is expected to have already mastered. You must use a non-graphing non-programmable scientific calculator on exams (with log, ln, root, and exponent (scientific notation) functions). 5 points will be deducted from your score if you neglect to sign the Honor Pledge question at the end of every exam.

All exams are remotely proctored by ProctorU. In-person examinations are not an option for this 100% online course. It is your responsibility to register with ProctorU and reserve an exam time on the assigned dates during available times:

Exam 1: May 26th; Exam 2: June 17th; Exam 3: July 19th; Final Exam: August 5th

To do so click on the ProctorU tab in Canvas. Reservations (exam start times) are available for each exam beginning at 6 pm, through 8 pm only. The final Exam will be available beginning at 9 am through 11 am.

If you fail to make a reservation sufficiently in advance (>72 h) a late fee may be assessed by ProctorU, and you may have difficulty obtaining a desirable time. Failure to reserve a time slot in advance is not an accepted excuse for a late exam.

If you encounter technical difficulties with ProctorU, contact ProctorU directly. If you have trouble navigating their reservation system, call them for assistance.

EXAM POLICIES

No makeup "do over" progress exams will be given for any reason. If you must be absent for an exam due to a documented and approved academic or UF athletic conflict, provide the documentation to your instructor at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you. If you are absent for an exam due to an unpredicted documented medical reason, you must contact

the instructor as soon as possible and have your excuse verified by the Dean of Students office. Your missed exam score will then be replaced by your pro-rated final exam score when calculating your final grade. More information on this policy can be found in the [General Chemistry Exam Absence Policy](#).

To alleviate the stress of potential issues that do not fall under officially-sanctioned absences, we have incorporated an “*average/replace*” policy (the lowest of the four progress exams will be replaced by the average of the four progress exams). This policy will help to minimize the impact of a single poor performance, but it will not completely disappear.

ASSIGNMENT POLICY

ALEKS OBJECTIVES

Access the electronic homework and eBook directly from within Canvas by navigating to Modules> ALEKS Science. A significant portion of your grade stems from on-time completion of equally weighted *ALEKS Objectives*. Whatever percentage of the topics you complete on time within an objective will count for credit - i.e. if you complete 7 of 10 topics within a particular objective assignment you will earn 70% credit for that objective, or 7/10 points for that objective. The average completion time is approximately 3 topics/h, system-wide in the ALEKS system. Plan your time accordingly.

ALEKS is set up in a specific manner - you will need to complete some topics in order to proceed to the next topic, as topics and concepts in chemistry build on one another. There isn't a way to disable this setting. You are encouraged to work on assignments early and frequently for short periods of time, no more than 2 or 3 h at a sitting.

The one lowest *ALEKS Objectives* grade is dropped from your overall course grade.

ALEKS objectives cannot be completed late for credit.

ALEKS PIE

A significant portion of your grade stems from completion of your *ALEKS Pie* by the date of your final exam (August 5th @ 11:59 pm EST). The work you do on *ALEKS Objectives* counts towards this goal. You can catch up or work ahead on your pie progress during *Open Pie* periods. We've scheduled *Open Pie* for all students in the course over the Winter break. Whenever you complete an *ALEKS Objective* before its due date/time you also will enter *Open Pie* mode. Pie progress is calculated as $(\# \text{ topics completed} / \text{total } \# \text{ topics}) * 100\%$. The pie progress % you view in ALEKS is a good estimate of this, but the precise value according to the calculation above is used in your grade calculation in Canvas.

WORKSHEETS

A portion of your grade stems from completion and submission of worksheets. You must *show your work* to earn full credit. Your instructor will review these and make comments on your work. Worksheets must be submitted to the assignment prior to the deadline to be considered for credit. For technical help with assignment submissions contact the UF Help Desk.

Worksheets can be completed late, with a late penalty of 25% per day submitted late. Note that if a worksheet is submitted even 1 s after the due date/time, the late penalty will apply.

The one lowest Worksheet grade is dropped from your overall course grade.

NOTES

Students are required to take notes while watching the lesson videos in each module. Note-taking helps with exam preparation and is recommended as a best study practice. You will upload your notes to Canvas for credit.

For technical help with assignment submissions contact the UF Help Desk.

CHECK-IN WITH INSTRUCTOR

The student is expected to check in with the instructor via zoom office hours at least once every three weeks. These check-ins are intended to provide communication with your instructor to ensure that you are keeping up with the course material, to assist with solving practice questions, to address course related concerns, and to discuss best study practices. You will log in for check-in with your instructor via zoom conference and full credit will be awarded if a minimum of four (4) of those meetings take place. Zoom sessions will not be recorded by the instructor/TA and may not be recorded by students. As in all courses, unauthorized recording and unauthorized sharing of recorded material is prohibited.

EXTENSIONS

Note that all due dates for assignments are clearly posted in the course assignments of the Canvas page and reflect the most up-to-date information. The deadline for assignments is 11:59 p.m. on the day stated on the lecture schedule. All assignments/quizzes must be completed by the stated due date and time for credit. Extensions for assignments (exams are covered under the General Chemistry Exam Absence Policy) can be requested due to illness or emergent situations.

You will be asked to have your situation verified by the Dean of Students Office before such an extension is considered. Information on requesting an excuse note can be found here:

<https://care.dso.ufl.edu/instructor-notifications/>

A Dean of Students note verifying documentation of illness or a personal matter must be provided for at least 50% of the days allocated for completion of the assignment (for example, if the duration of a Module is six days, documentation of illness or a personal matter should be provided for at least three of those days) 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.

Exam dates are firm, and all assignments must be completed by the last day of term.

GRADING

GRADE POLICY

Should a student wish to dispute any grade received in this class, the dispute must be in writing and be submitted to the instructor via Canvas mail within 96 h of receiving the grade, and within 24 h for the Final Exam.

There is no extra credit available for this course beyond the generous dropped assignment policy. Grades are not rounded at the end of term. Exam grades or course grades are not curved. Take care to complete each assignment prior to its advertised due date and to submit assignments as directed. Contact the UF Help Desk for help with Canvas.

Assignments weights are as follows:

Assignment Group	Weight %
ALEKS Objectives	8%
ALEKS Pie Progress	8%
Progress Exams (3 @ 15% each)	45%
Cumulative Final Exam	20%
Worksheets	5%
Quizzes	10%
Notes	2%
Check-in with instructor	2%

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	90.0	86.0	83.0	80.0	77.0	73.0	69.0	66.0	63.0	60.0	< 60.0

UNIVERSITY POLICIES

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES

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.

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). 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.

UNIVERSITY POLICY ON 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: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

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.

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. Multicultural and Diversity Affairs (MCDA) is a department within the Division of Student Affairs that celebrates and empowers diverse communities and advocates for an inclusive campus for all students across identities. 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: <https://multicultural.ufl.edu/>

COUNSELING AND WELLNESS CENTER

Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.

FEEDBACK

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. <http://biostat.ufl.edu/resources/e-learning-resources/e-learning-basics/etiquette-online/>

GETTING HELP

For issues with or technical difficulties with Canvas, contact the UF Help Desk: <https://lss.at.ufl.edu/help.shtml>; (352)-392-HELP. Other resources are available at <http://www.distance.ufl.edu/getting-help> for Counseling and Wellness resources, disability resources, resources for handling student concerns and complaints, and library desk support.

GENERAL EDUCATION

This course satisfies the General Education requirement in the Physical Sciences.

PHYSICAL SCIENCE GENERAL EDUCATION PROGRAM OBJECTIVES

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 course, and individual work done on homework assignments and assessments.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES

This course satisfies the General Education requirement in the Physical Sciences. A minimum grade of C is required for general education credit.

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.

Naturally, all three areas of learning outcomes will be assessed in all categories of graded assignment administered in CHM 2046.

SPECIFIC GOALS OF CHM2046

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 on discussion assignments, written assignments, and in discussion with your instructor/TA. We will also demonstrate how these topics can be applied to the scientific method and how observation and experimentation leads us to the development of scientific theories. 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.

COURSE LEARNING OUTCOMES

A complete list of student learning outcomes is posted in Canvas.

ESSENTIAL SKILLS FOR SUCCESS IN CHM 2046

Critical Thinking: Critical thinking skills are essential in the general chemistry course. There are six criteria by which we promote critical thinking: 1. Information acquisition: Identifying and differentiating questions, problems and arguments. 2. Application: Assessing the suitability of various methods of reasoning and confirmation when approaching a problem. Students are taught to develop hypotheses and to find support and limitations associated with their hypotheses. 3. Analysis: Identifying and analyzing stated and unstated assumption and using logical reasoning to evaluate different viewpoints. 4. Synthesis: Students are encouraged to formulate questions and problems, construct arguments to address such questions and be able to effectively communicate conclusions. 5. Communication: In discussion of alternative points of view, students will be encouraged to criticize or defend their arguments with the use of logical reasoning and evidence. 6. Evaluation: Assessing the quality of evidence and reasoning to draw reasonable conclusions.

Mathematics: It is crucial in the general chemistry course to be competent in mathematics. Listed are the criteria by which we promote understanding and application of math: 1. Information acquisition: Students learn to select data that is pertinent to solving a problem. 2. Application: Use of algebraic, geometric and statistical reasoning to solve problems. 3. Analysis: Interpret and draw conclusions from formulas, graphs and tables. 4. Synthesis: To associate patterns and observations to more abstract principles and to consider

specific applications of such principles. 5. Communication: Communicating information symbolically, graphically, numerically and verbally. 6. Evaluation: Estimate and verify solutions to mathematical problems to determine reasonableness, compare alternatives and select optimal results and understand the limitations of mathematical and statistical methods.

TENTATIVE WEEKLY SCHEDULE

Note: this is designed to replicate F2F class

Monday	Tuesday	Wednesday	Thursday	Friday
May 10 Orientation Module	11 Module 1 Lesson 16.1 Orientation Quiz	12 Lesson 16.2	13 Lesson 16.2 contd.	14 Module 1/Ch. 16 Study Room & Worksheet
17 Ch. 16 Quiz ALEKS HW Ch. 16	18 Module 2 Lesson 17.1	19 Lesson 17.1 contd	20 Lesson 17.1 contd Module 2/Ch. 17 Study Room & WS	21 Ch. 17 Quiz ALEKS HW Ch. 17
24 Module 3 Lesson 18.1	25 Lesson 18.2	26 Exam 1 (CH 16, 17)	27 Lesson 18.2 contd.	28 Module 3/Ch. 18 SR & WS
31 Holiday	June 1 Ch. 18 Quiz ALEKS HW Ch. 18	2 Module 4 Lesson 19.1	3 Lesson 19.1 contd.	4 Lesson 19.1 contd.
7 Lesson 19.1 contd.	8 Mod 4/Ch. 19 SR & WS	9 Ch. 19 Quiz ALEKS HW Ch. 19	10 Module 5 Lesson 23.1	11 Lesson 23.1 contd
14 Lesson 23.1 contd	15 Mod 5 Ch. 23 SR/WS	16 Ch. 23 Quiz ALEKS HW Ch. 23	17 Exam 2 (CH 18, 19, 23)	18 Catch up on ALEKS Pie Progress

21 Summer Break	22 Summer Break	23 Summer Break	24 Summer Break	25 Summer Break
28 Module 6 Lesson 20.1	29 Lesson 20.1 contd.	30 Lesson 20.1 contd.	July 1 Lesson 20.1 contd.	2 Mod 6 Ch. 20 SR/WS
5 Holiday	6 Ch. 20 Quiz ALEKS HW Ch. 20	7 Module 7 Lesson 21.1	8 Lesson 21.1 contd	9 Lesson 21.1 contd
12 Lesson 21.2	13 Lesson 21.2 cont'd	14 Lesson 21.2 cont'd	15 Mod 7 Ch. 21 SR/WS	16 Ch. 21 Quiz ALEKS HW Ch. 21
19 Exam 3 (CH 20, 21)	20 Module 8 Lesson 24.1	21 Lesson 24.1 contd.	22 Lesson 24.1 contd.	23 Mod 8 Ch. 24 SR & WS
26 Ch. 24 Quiz ALEKS HW Ch. 24	27 Module 9 Lesson 15.1	28 Lesson 15.1 contd.	29 Lesson 15.1 contd.	30 Mod 9 Ch. 15 SR & WS
August 2 Ch. 15 Quiz ALEKS HW for Ch. 15	3 Review for Final Exam & Catch up on ALEKS Pie Progress	4 Review for Final Exam & Catch up on ALEKS Pie Progress	5 Cumulative Final Exam	6 ALEKS Pie is due

DISCLAIMER

This syllabus represents current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.