

CHM2045 GENERAL CHEMISTRY I UFO

FALL 2022

INSTRUCTOR INFORMATION

Instructor

Email

Office Hours (Zoom)

TBA

GENERAL INFORMATION

CREDITS/PREREQUISITES

3 credits. Prerequisites: a C or higher in MAC1147 or the equivalent or higher and a passing score on the ALEKS Math placement exam or a C or higher in CHM1025. Check the Course Catalog for math requirements to continue in general chemistry sequence.

COURSE FEES

Additional course fees: none.

MEETING TIMES

This is a 100% online course. Virtual office hours will be scheduled weekly throughout the semester and can be made by appointment.

COURSE DESCRIPTION/GOALS

CHM 2045 is the first semester of the CHM2045/CHM2045L and CHM2046/CHM2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM2046. (P)

By the end of this course, students will be able to describe and apply the scientific method, and describe and apply skills to solving problems including those involving multi-step mathematical sequences. Students will acquire knowledge generally of the field of chemistry, and will be able to connect this knowledge to 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.

GENERAL EDUCATION OBJECTIVES AND LEARNING OUTCOMES

Primary General Education Designation: Physical Sciences (P) ([area objectives available here](#))

A minimum grade of C is required for general education credit. Courses intended to satisfy the general education requirement cannot be taken S/U.

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.

In General Chemistry I, these objectives will be met as detailed below.

At the end of this course, students will be expected to have achieved the following learning outcomes in content, communication, and critical thinking:

Content: *Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline.* Students will acquire a basic knowledge of a variety of chemistry concepts including the scientific method, stoichiometry, reaction types, thermodynamics, solutions, solids, gases, and chemical bonding. Achievement of this learning outcome will be assessed largely through assigned homework problems, and quizzes and exams.

Communication: *Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.* Students participate in class discussions throughout the semester to reflect on pertinent topics. Achievement of this learning outcome is realized through discussion sessions and/or office hours during which students formulate questions, construct arguments, and use logical reasoning to draw reasonable conclusions.

Critical Thinking: *Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems.* Students apply mathematical knowledge and reasoning to solve chemical problems. This may entail use of algebra, basic geometry, and graphical analysis. Achievement of this learning outcome is largely assessed via worksheets, assigned homework problems, and quizzes and exams.

COURSE LEARNING OUTCOMES

A complete list of student learning outcomes is posted in Canvas, organized by module/chapter.

COURSE MATERIALS

ALEKS PREP FOR CHM2045 (REQUIRED IN FULL; NO CHARGE)

ALEKS Prep: We highly recommend completing the ALEKS Prep course, which counts towards your overall course grade, before starting to work on the ALEKS HW for this course. ALEKS Prep is a completely different course in ALEKS, from the ALEKS homework you'll be doing this semester. You should begin and complete the ALEKS Prep as early as possible. Information on how to access the Prep **at no additional charge** is provided on our [ALEKS information page](#).

ALEKS Prep can count for as much as 2% of your final course grade. A minimum % completion is required to earn any credit, according to the table below. For Fall 2022, the ALEKS Prep is due 9/9/2022 without exception.

% ALEKS complete	<70%	70 - <80%	80 - <90%	90 - <99%	99 - 100%
% grade earned	0%	0.5%	1.0%	1.5%	2%

TEXTBOOK (ONLINE EBOOK WITH HW; REQUIRED IN FULL)

The text Chemistry: The Molecular Nature of Matter and Change, 9th ed., Silberberg & Amateis (McGraw Hill) is required. Access to the textbook is via the ALEKS platform, accessed through a link in your Canvas course. A portion of your grade may stem from electronic homework (ALEKS) via the same link. You must purchase ALEKS360 (both the text and electronic homework) for the course. This includes access for the ALEKS Prep for CHM2045 at no additional charge to you.

There are two options for purchasing access to homework/ebook: **Option 1:** consent to have the purchase price charged to your student account following the directions posted on the course homepage in Canvas; this is a time-limited option after which only Option 2 is available. **Option 2:** purchase an access code for the materials at the UF Bookstore (at a slightly higher price).

To opt in, navigate to: <https://bsd.ufl.edu/allaccess>. Click the “Opt In” tab or view the “View Eligible UF All Access Classes” button. You will be prompted to log in using Gatorlink credentials. Follow the prompt to authorize charges to your student account. The access code will then be provided. Copy the access code to your clipboard. In the Canvas course, click on the ALEKS module, and provide the access code when prompted to do so. If you have any questions about the authorization process or refunds contact Included@bsd.ufl.edu.

A paperback version of the text is completely optional. The bookstore may stock paper versions of the text, or you can order one directly through the McGraw Hill website. A paper version is on reserve at the Marston Science Library for reference purposes.

All other assigned material will be available through Canvas.

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% (that is, - 5 points in the Canvas gradebook) deducted from your score, 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). Your 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: Sept. 21; Exam 2: Oct. 18; Exam 3: Nov. 18; Final Exam: Dec. 12

To do so click on the ProctorU tab in Canvas. Reservations (exam start times) are available for each Progress exam beginning at 6 pm through 8:00 pm only. The Final Exam will be available for its designated 2 h window, 12:30-2:30 pm, Dec. 12.

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

If you suspect an error in the grading of an exam, it is your responsibility to notify the lecturer in via email within one week of the grade being posted on Canvas for consideration. No grade change considerations or changes will be made after this one week period.

PROGRESS EXAM “AVERAGE/REPLACE” POLICY

This applies to all students. No progress exam score will be dropped for any reason. 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 three progress exams will be replaced by the average of the three progress exams. This policy helps to minimize the impact of a single poor performance (it will not disappear, but will be minimized). For example, if a student scores the following on their three progress exams: 0%, 65%, 80%, the 0% would be replaced with the average of 0, 65 and 80, which is 48%. That is a much better score than a 0.

ASSIGNMENT POLICY

ALEKS OBJECTIVES

Access the electronic homework and eBook directly from within Canvas by navigating to Modules > ALEKS > 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 last day of the semester. 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. 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.

CHAPTER PROBLEM SETS

A portion of your grade stems from completion of chapter problem sets in Canvas. These problem sets

are intended to provide additional robust questions aimed to enhance student understanding of the chemistry concepts covered in this course. Each set has a displayed deadline for earning full credit; you can earn up to 8% toward your grade by completing these assignments. You will have multiple attempts to answer the problem sets. Failure to access a problem set at least once before its due date will result in the loss of ability to access that set for the remainder of the semester. Students that miss a set deadline due to an excused absence can request an extension by contacting the instructor.

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

The one lowest Chapter problem set score is dropped from your overall course grade.

Problem sets can be completed late, with a late penalty of 10% per day submitted late. Note that if a problem set is submitted even 1 s after the due date/time, the late penalty will apply.

STUDY ROOMS

The student is expected to contribute to threaded discussions in topic-specific Study Rooms according to the advertised timeline in Canvas. While entries can be made after the due date, discussions cannot be submitted for credit after the deadline. There are no exceptions. Post early and check your post/response. **Your initial post must be made at least one day before the study room deadline to allow other students enough time to view and respond to your question.** Emailed submissions are not considered for credit.

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

The one lowest Study Room discussion grade is dropped from your overall course grade.

Note that if a participation (original post and/or follow up posts) is submitted even 1 s after the due date/time, no credit will be applied.

PRACTICE ACTIVITIES

Practice activities (Quizlet activities, practice quizzes, simulations, etc.) are provided in Canvas. Practice activities do not count for credit but offer additional avenues to increase understanding as you prepare for exams.

CHECK-IN WITH INSTRUCTOR / OFFICE HOURS

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 five (5) 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.

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/>

Exam 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 may include 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/#absencetext>). If you must be absent for an exam due to a documented and approved conflict known in advance, you must e-mail your instructor (within Canvas) 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 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 from you or from 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.

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 within 96 h of receiving the grade, and within 24 h of 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 Prep	2%
ALEKS Objectives	6%
ALEKS Pie Progress	8%
Progress Exams (3 @ 15% each)	45%
Cumulative Final Exam	20%
Chapter Problem Sets	8%
Quizzes	6%
Study Rooms	3%
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

AUDIO/VIDEO PRESENCE POLICY

Zoom Check-ins with the instructor and/or TA office hours sessions are not generally recorded. Should it be necessary to record a session, an announcement will be made in advance. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during sessions and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded, you will need to keep your mute button activated and communicate exclusively using the 'chat' feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

Full audio/video presence is required for proctored tests administered by Honorlock.

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.

TENTATIVE WEEKLY SCHEDULE

You can expect to follow the schedule for the face-to-face sections, as we share common exams. Their tentative lecture schedule is posted below. A complete list of ALEKS homework and quiz dates is provided in Canvas.

Dates	Topics (# of lectures)	Silberberg Chapters
Aug 24	Introduction and Review (1)	Chap. 1-2
Aug 26 - Aug 29	Mass Relations and Stoichiometry (2)	Chap. 3
Aug 31 - Sep 9	Aqueous Reactions (4)	Chap. 4
Sep 12 - Sep 16	Gases (3)	Chap. 5
Sep 19	Review	Cumulative
Wednesday, Sep 21	Progress Exam 1 (8:20pm-10:20pm)	Cumulative
Sep 21 - Sep 28	Enthalpy & Calorimetry (4)	Chap. 6

Sep 30 - Oct 10 (Oct 7 is homecoming)	Chemical Kinetics (4)	Chap. 16
Oct 12 - Oct 14	Quantum Mechanical Model (2)	Chap. 7
Oct 17	Review	Cumulative
Tuesday, Oct 18	Progress Exam 2 (8:20pm-10:20pm)	Cumulative
Oct 19 - Oct 24	Electron Configuration and Periodic Trends (3)	Chap. 8
Oct 26 - Oct 28	Chemical Bonding Models (2)	Chap. 9
Oct 31 - Nov 7	Molecular Geometry (4)	Chap. 10
Nov 9 - Nov 14	Covalent Bonding Theories (2)	Chap. 11
Nov 16	Review	Cumulative
Friday, Nov 18	Progress Exam 3 (8:20pm-10:20pm)	Cumulative
Nov 18 - Nov 30	Intermolecular Forces, Liquids and Solids (4)	Chap. 12
Dec 2 - Dec 7	Properties of Solutions (3)	Chap. 13
Monday, Dec 12	Final Exam (12:30pm-2:30pm)	Cumulative

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.