

# CHM2045 GENERAL CHEMISTRY I

FALL 2023

## INSTRUCTOR INFORMATION

Instructors	Email/Office/Phone	Office Hours
<b>Dr. Simon Enrique Lopez D'Sola</b> <b>Assistant Instructional Professor</b> <b>(post bac section only)</b>	Email in Canvas preferred <a href="mailto:simonlopez@chem.ufl.edu">simonlopez@chem.ufl.edu</a> 352-392-9700 LEI 312	M, W 12:30-2:00 pm

## TEACHING ASSISTANTS

Grad TAs: TBA

Email: TBA

Office hours: TBA

Undergraduate TAs: TBA

[Broward Teaching Center](#) offers free virtual tutoring assistance. See their website for details.

## COURSE DELIVERY/MEETING TIMES

The course is delivered in a face to face format. Discussion Worksheets will be delivered weekly at Canvas on Fridays, starting the second week of classes. Exams are evening assembly exams, on campus, rooms TBA, periods E2-E3.

## COURSE FEES

Additional Course Fees: none

## GENERAL INFORMATION

### PREREQUISITES

Please refer to the [Undergraduate Catalog](#) for placement and prerequisite information.

### COURSE DESCRIPTION AND GOALS

The first semester of the CHM 2045/CHM 2045L and CHM 2046/CHM 2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM 2046. (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 daily for new Announcements and/or emails containing important information. Your instructor has provided information in Canvas on recommended study habits/skills to help you succeed in the course.

## 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.

## REQUIRED & RECOMMENDED COURSE MATERIALS

### TEXTBOOK (ONLINE EBOOK WITH HW; REQUIRED IN FULL)

The text Chemistry: The Molecular Nature of Matter and Change, 9<sup>th</sup> 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](mailto: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.

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

Completion of the [ALEKS Prep course for CHM2045](#), in an ALEKS course designated Fall 2023, counts towards your overall course grade in CHM2045. The Prep is provided at no additional charge. Only student work within the prep course for Fall 2023 counts for credit for Fall 2023. Detailed information 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 2023, 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%

### CALCULATOR (REQUIRED, MUST PURCHASE)

You will require a calculator capable of logarithmic functions. For exams, the calculator must be non-graphing and non-programmable.

## COURSE COMMUNICATIONS

### GENERAL QUESTIONS

General course questions should be posed to your instructor during office hours, or to TAs during their office hours or during discussion sessions.

### 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. Instructor response time to email queries is <48 h during the workweek, or the first business day for emails received Friday or over the weekend.

## COURSE POLICIES

### ASSIGNMENT DUE DATES

All due dates for assignments are clearly posted in the course assignments of the Canvas page and reflect the most up-to-date information. All assignments must be completed by the stated due date and time for credit. A Dean of Students note verifying documentation of illness or personal matter must be provided for at least five of the seven days of the week of the assignments' deadline for accommodations to be considered.

### PRE-LECTURE ASSIGNMENTS (PLAS)

You are expected to complete pre-lecture assignments in preparation for each class day. These assignments are based on the reading in the required textbook and on the sample problems therein. These assignments will be posted on Canvas under the quizzes tab and are due prior to class. You will have multiple attempts to successfully answer the pre-lecture assignments. Three of these assignment grades are dropped from your overall course grade.

### DISCUSSION SESSIONS & WORKSHEETS

Discussion classes meet per your scheduled day/time, and attendance is mandatory. A total of 10 points can be earned each week by attending your discussion class (5 points) and correctly answering the worksheet questions in Canvas (5 points). Open/close times of the Canvas quiz varies by day of discussion. The paper worksheets will be posted on Canvas in advance, and you may start working on it before you come to discussion. Grade discrepancies should be addressed with your graduate TA within a week of grades posting to Canvas. One assignment will be dropped from this category before calculating your final grade.

### ALEKS HOMEWORK AND QUIZZES

ALEKS HW are due twice per week; each has an ALEKS video assignment as a prerequisite. You have multiple attempts at each homework assignment, with the highest score counting for credit. An ALEKS quiz is due each week on material covered that week in class. Quizzes are timed, with one attempt. One ALEKS quiz and 3 ALEKS homework assignment scores are dropped from your overall course grade.

## IClicker

iClicker is a classroom response system used for in-class participation during lectures. Several points are dropped before calculating the final iClicker score for each student. Detailed will be announced at a later date in Canvas.

## CANVAS HOMEWORK (OPTIONAL/FOR PRACTICE)

Several optional homework assignments are available for each chapter to help you understand the material. The homework is posted in Canvas. You have multiple attempts to successfully answer the questions. These are not worth any points.

You should also work on numerous End-of-Chapter questions (EOCs).

## EXAMS

Exams occur in the evenings, periods E2-E3, in exam rooms TBA. Exam Dates are provided in the schedule at the end of this syllabus document. You are permitted use of a non-graphing non-programmable scientific calculator. Notes, cell phones or other electronic devices are not permitted. Scantrons and blank paper are provided.

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## 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.

A significant penalty is assessed for student failure to bubble in the correct form code on the scantron.

## POSTED GRADE DISPUTES

Should a student wish to dispute any grade received in this class, the dispute must be in writing (via Canvas e-mail to *your* instructor) and submitted within one week of the grade being posted to Canvas. After one week has passed from when the grade was posted and the student made aware of the posting of the grade(s) to Canvas, the instructor considers those grades final.

## ATTENDANCE, EXTENSION REQUESTS

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.

## WORKLOAD

As a Carnegie I, research-intensive university, UF is required by federal law to assign at least 2 hours of work per week outside of class for every contact hour. Work done in these hours may include reading/viewing assigned material and doing explicitly assigned individual or group work, as well as reviewing notes from class, synthesizing information in advance of exams or papers, and other self-determined study tasks.

## GRADING

### GRADE POLICY

There is no extra credit available for this course. Grades are not rounded at the end of term. Exam grades or course grades are not curved. Current UF grading policies for assigning grade points can be found in [the catalog](#).

Assignments weights are as follows:

Assignment Group	Weight %
Progress Exams	60%
Final Cumulative Exam	23%
ALEKS Prep	2%
ALEKS Homework	3%
ALEKS Quizzes	3%
iClicker	1%
Pre-Lecture Assignments	3%
Discussion/Worksheets	5%
<b>TOTAL</b>	<b>100%</b>

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

### STUDENTS REQUIRING ACCOMMODATIONS

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](http://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.

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: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>."

### IN-CLASS RECORDING

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. 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.

## CAMPUS RESOURCES

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto: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.

## ACADEMIC RESOURCES

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

[Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

[Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.

[Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

[Writing Studio](#): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the [Student Honor Code and Student Conduct Code webpage](#) for more information.

On-Line Students Complaints: View the [Distance Learning Student Complaint Process](#).



## 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/>.

## 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.

## 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. 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: <http://www.multicultural.ufl.edu/>

## DISCLAIMER

This syllabus represents my 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.

## TENTATIVE SCHEDULE

The following lecture schedule is tentative, but exam dates will not change.

Dates	Topics (# of lectures)	Silberberg Chapters
Aug 24 - Aug 29	Introduction and Review (4)	Chap. 1-2
Aug 31 -Sep 5	Mass Relations and Stoichiometry (4)	Chap. 3
Sep 7 - Sep 12	Aqueous Reactions (4)	Chap. 4
Sep 14 – Sep 19	Gases (4)	Chap. 5
Sep 21	Review (1)	Cumulative
<b>Friday, Sep 22</b>	<b>Progress Exam 1 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Sep 21 – Sep 26	Enthalpy & Calorimetry (3)	Chap. 6

Sep 28 – Oct 3	Quantum Mechanical Model (3)	Chap. 7
Oct 3, Oct 5	Electron Configuration and Periodic Trends (3)	Chap. 8
Oct 10 – Oct 12	Chemical Bonding Models (4)	Chap. 9
Oct 17	Review (1)	Cumulative
<b>Thursday, Oct 19</b>	<b>Progress Exam 2 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Oct 24 – Oct 26	Molecular Geometry (4)	Chap. 10
Oct 31 – Nov 2-7	Covalent Bonding Theories (6)	Chap. 11
Nov 9 – 14	Intermolecular Forces, Liquids and Solids (4)	Chap. 12
Nov 16	Review (1)	
<b>Thursday, Nov 16</b>	<b>Progress Exam 3 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Nov 21 – Nov 28	Properties of Solutions (4)	Chap. 13
Nov 30 – Dec 5	Chemical Kinetics (4)	Chap. 16
<b>Saturday, Dec 9</b>	<b>Final Exam (3:00pm-5:00pm)</b>	<b>Cumulative</b>

# CHM2045 GENERAL CHEMISTRY I UFO

FALL 2023

## INSTRUCTOR INFORMATION

Instructor	Email	Office Hours (Zoom)
TBA	Email in Canvas <u>only</u>	Virtual Office Hours via Zoom TBA
<b>Graduate Teaching Assistant</b> TBA	Email in Canvas <u>only</u>	Virtual Office Hours via 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.

### MEETING TIMES

This is a 100% online course. Virtual office hours (via Zoom conference) 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.

% ALEKS complete	<70%	70 - <80%	80 - <90%	90 - <99%	99 - 100%
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% grade earned	0%	0.5%	1.0%	1.5%	2%
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### TEXTBOOK (ONLINE EBOOK WITH HW; REQUIRED IN FULL)

The text Chemistry: The Molecular Nature of Matter and Change, 9<sup>th</sup> 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](http://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).

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

Chapter quizzes are delivered in ALEKS. These quizzes are not proctored, but are timed, and are subject to the Honor Code. It is recommended that you watch the corresponding lecture videos and complete all your assignments prior to attempting each quiz. When you're ready to begin, simply click 'Assignments' from the dropdown menu in ALEKS and select your chapter quiz. 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 one week late submission (Chapter 13 quiz may be submitted late up till the last day of classes). 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. 22<sup>nd</sup>;      Exam 2: Oct. 19<sup>th</sup>;      Exam 3: Nov. 16<sup>th</sup>;      Final Exam: Dec. 9<sup>th</sup>**

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.

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.

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, bring 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 three progress exams will be replaced by the average of the three progress exams). This policy will help to minimize the impact of a single poor performance, but it will not completely disappear.

## ASSIGNMENT POLICY

### ALEKS MODULES (HOMEWORK)

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 (# topics completed/total #

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.

## LECTURE VIDEO PLAYPOSIT QUESTIONS

The material from each chapter that will be covered in this course is arranged by individual Modules in Canvas. Lecture videos that are enhanced with graded playposit questions are provided in each chapter lesson. Please watch the videos in their entirety and answer the proposed questions at various timepoints throughout the videos. The playposit questions are intended to check for understanding of the concepts that are presented in each video. There will be a displayed deadline for earning full credit. You will have five (5) attempts for each playposit question and you can earn up to 2% toward your course grade by answering the questions.

The one lowest lecture video playposit score is dropped from your overall course grade.

## 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 5% 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.

## DISCUSSIONS

The student is expected to contribute to threaded discussions on specific topics 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 entry must be made at least three days before the discussion deadline to allow other students enough time to view and respond to your post.** Emailed submissions are not considered for credit.

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

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, worksheets 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 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. Students may attend zoom office hours as often as they like, however only 1 every three weeks starting from the second week of classes is counted towards check-in credit.

## 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 Modules	6%
ALEKS Pie Progress	6%
Progress Exams (3 @ 15% each)	45%
Cumulative Final Exam	20%
Chapter Problem Sets	5%
Quizzes	7%
Lecture Video Playposit Questions	5%
Discussions	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

### 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](https://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](mailto: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

Your course schedule is designed to replicate face-to-face sections, as we share common exams.

Dates	Topics (# of traditional lecture days)	Silberberg Chapters
Aug 23 - Aug 25	Introduction and Review (2)	Chap. 1-2
Aug 28 - Aug 30	Mass Relations and Stoichiometry (2)	Chap. 3
Sep 1, Sep 6 - 11	Aqueous Reactions (4)	Chap. 4
Sep 13 - Sep 18	Gases (3)	Chap. 5
Sep 20	Review	Cumulative
<b>Friday, Sep 22</b>	<b>Progress Exam 1 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Sep 22 - Sep 27	Enthalpy & Calorimetry (3)	Chap. 6
Sep 29 - Oct 2	Quantum Mechanical Model (2)	Chap. 7
Oct 4, Oct 9 - 11	Electron Configuration and Periodic Trends (3)	Chap. 8
Oct 13 - Oct 16	Chemical Bonding Models (2)	Chap. 9
Oct 18	Review	Cumulative
<b>Thursday, Oct 19</b>	<b>Progress Exam 2 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Oct 20 - Oct 27	Molecular Geometry (4)	Chap. 10
Oct 30 - Nov 1	Covalent Bonding Theories (2)	Chap. 11
Nov 3 - 8, Nov 13	Intermolecular Forces, Liquids and Solids (4)	Chap. 12
Nov 15	Review	
<b>Thursday, Nov 16</b>	<b>Progress Exam 3 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Nov 17 - 20, Nov 27	Properties of Solutions (3)	Chap. 13
Nov 29 - Dec 6	Chemical Kinetics (4)	Chap. 16
<b>Saturday, Dec 9</b>	<b>Final Exam (3:00pm-5:00pm)</b>	<b>Cumulative</b>

## 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.

# CHM2045 GENERAL CHEMISTRY I

FALL 2023

## INSTRUCTOR INFORMATION

Instructors	Email/Office/Phone	Office Hours
<b>Dr. Martina Sumner</b> <b>Associate Instructional Professor</b>	Email in Canvas preferred <a href="mailto:m.sumner@chem.ufl.edu">m.sumner@chem.ufl.edu</a> 352-392-0517 Keene Flint 250	TBA
<b>Dr. Steven Harris</b> <b>Assistant instructional Professor</b>	Email in Canvas preferred <a href="mailto:steven.harris@chem.ufl.edu">steven.harris@chem.ufl.edu</a> 352-273-3717 SFH 302A	TBA
<b>Dr. Ashlyn Hale</b> <b>Assistant Instructional Professor</b>	Email in Canvas preferred <a href="mailto:Ashlyn.rose.hale@chem.ufl.edu">Ashlyn.rose.hale@chem.ufl.edu</a> Phone: TBD Office: TBD	TBA

## TEACHING ASSISTANTS

Grad TAs: TBA

Email: TBA

Office hours: TBA

Undergraduate TAs: TBA

## COURSE DELIVERY/MEETING TIMES

The course is delivered in a face to face format. Instructors *may* decide to offer Zoom/HyFlex options for lecture times only but are not required to do so. Discussion sections are held only in-person in assigned classrooms at assigned class meeting times. Exams are evening assembly exams, on campus, rooms TBA, periods E1-E2.

## COURSE FEES

Additional Course Fees: none

## GENERAL INFORMATION

## PREREQUISITES

Please refer to the [Undergraduate Catalog](#) for placement and prerequisite information.

## COURSE DESCRIPTION AND GOALS

The first semester of the CHM 2045/CHM 2045L and CHM 2046/CHM 2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM 2046. (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 daily for new Announcements and/or emails containing important information. Your instructor has provided information in Canvas on recommended study habits/skills to help you succeed in the course.

## 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.

## REQUIRED & RECOMMENDED COURSE MATERIALS

### TEXTBOOK (ONLINE EBOOK WITH HW; REQUIRED IN FULL)

The text *Chemistry: The Molecular Nature of Matter and Change*, 9<sup>th</sup> 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](mailto: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.

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

Completion of the [ALEKS Prep course for CHM2045](#), in an ALEKS course designated Fall 2023, counts towards your overall course grade in CHM2045. The Prep is provided at no additional charge. Only student work within the prep course for Fall 2023 counts for credit for Fall 2023. Detailed information 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.

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

## CALCULATOR (REQUIRED, MUST PURCHASE)

You will require a calculator capable of logarithmic functions. For exams, the calculator must be non-graphing and non-programmable.

## COURSE COMMUNICATIONS

### GENERAL QUESTIONS

General course questions should be posed to your instructor during office hours, or to TAs during their office hours or during discussion sessions.

### 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. Instructor response time to email queries is <48 h during the workweek, or the first business day for emails received Friday or over the weekend.

## COURSE POLICIES

### ASSIGNMENT DUE DATES

All due dates for assignments are clearly posted in the course assignments of the Canvas page and reflect the most up-to-date information. All assignments must be completed by the stated due date and time for credit. A Dean of Students note verifying documentation of illness or personal matter must be provided for at least five of the seven days of the week of the assignments' deadline for accommodations to be considered.

### PRE-LECTURE ASSIGNMENTS (PLAS)

You may be expected to complete pre-lecture assignments in preparation for each class day. These assignments are based on the reading in the required textbook and on the sample problems therein. These assignments will be posted on Canvas under the quizzes tab and are due prior to class. You will have multiple attempts to successfully answer the pre-lecture assignments. Up to three of these assignment grades are dropped from your overall course grade.

### DISCUSSION SESSIONS & WORKSHEETS

Discussion classes meet per your scheduled day/time, and attendance is mandatory. A total of 10 points can be earned each week by attending your discussion class (5 points) and correctly answering the worksheet questions in Canvas (5 points). Open/close times of the Canvas quiz varies by day of discussion. The paper worksheets will be posted on Canvas in advance, and you may start working on it before you come to discussion. Grade discrepancies should be addressed with your graduate TA within a week of grades posting to Canvas. One assignment will be dropped from this category before calculating your final grade.

## ALEKS HOMEWORK

ALEKS HW are due frequently. You have multiple attempts to answer questions correctly.

## ALEKS QUIZZES

ALEKS quizzes are graded and are designed to act as a readiness check for exams.

## IClicker

iClicker is a classroom response system used for in-class participation during lectures. Several points are dropped before calculating the final iClicker score for each student. Detailed will be announced at a later date in Canvas.

## AFTER LECTURE QUIZZES AND CANVAS HOMEWORK (OPTIONAL/FOR PRACTICE)

After-lecture quizzes after each day's lecture. These quizzes are posted on Canvas (and under Modules for each chapter) and are due at the end of the lecture day by 11:59 pm. You will have 3 attempts to successfully answer the quizzes.

Several optional homework assignments are available for each chapter to help you understand the material. The homework is posted in Canvas. You have multiple attempts to successfully answer the questions. These are not worth any points.

You should also work on numerous End-of-Chapter questions (EOCs).

## EXAMS

Exams occur in the evenings, periods E1-E2, in exam rooms TBA. Exam Dates are TBA. You are permitted use of a non-graphing non-programmable scientific calculator. Notes, cell phones or other electronic devices are not permitted. Scantrons, formula sheet, and blank paper are provided.

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## 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.

A significant penalty is assessed for student failure to bubble in the correct form code on the scantron.

## POSTED GRADE DISPUTES

Should a student wish to dispute any grade received in this class, the dispute must be in writing (via Canvas e-mail to *your* instructor) and submitted within one week of the grade being posted to Canvas. After one week has passed from when the grade was posted and the student made aware of the posting of the grade(s) to Canvas, the instructor considers those grades final.

## ATTENDANCE, EXTENSION REQUESTS

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/#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 (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.

## WORKLOAD

As a Carnegie I, research-intensive university, UF is required by federal law to assign at least 2 hours of work per week outside of class for every contact hour. Work done in these hours may include reading/viewing assigned material and doing explicitly assigned individual or group work, as well as reviewing notes from class, synthesizing information in advance of exams or papers, and other self-determined study tasks.

## GRADING

### GRADE POLICY

There is no extra credit available for this course. Grades are not rounded at the end of term. Exam grades or course grades are not curved. Current UF grading policies for assigning grade points can be found in [the catalog](#).

Assignments weights will resemble the following for each section. Some instructors may have varying grade breakdowns.

Assignment Group	Weight %
Progress Exams (3)	60%
Final Cumulative Exam	23%
ALEKS Prep	2%

<b>ALEKS adaptive Homework</b>	3%
<b>ALEKS Quizzes</b>	3%
<b>iClicker</b>	1%
<b>Pre-Lecture Assignments</b>	3%
<b>Discussion/Worksheets</b>	5%
<b>TOTAL</b>	<b>100%</b>

Grade scale (note: there is no rounding to your score in Canvas):

<b>Letter</b>	<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>	<b>C+</b>	<b>C</b>	<b>D+</b>	<b>D</b>	<b>D-</b>	<b>E</b>
<b>Cutoff</b>	90.0	86.0	83.0	80.0	77.0	73.0	69.0	66.0	63.0	60.0	< 60.0

## UNIVERSITY POLICIES

### STUDENTS REQUIRING ACCOMMODATIONS

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](http://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.

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: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.”

## IN-CLASS RECORDING

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. 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.

## CAMPUS RESOURCES

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto: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.

## ACADEMIC RESOURCES

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

On-Line Students Complaints: View the Distance Learning Student Complaint Process.

## 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/>.

## 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.

## 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. 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: <http://www.multicultural.ufl.edu/>

## DISCLAIMER

This syllabus represents my 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.

## TENTATIVE SCHEDULE

The following lecture schedule is tentative, but exam dates will not change.

<b>Dates</b>	<b>Topics (# of lectures)</b>	<b>Silberberg Chapters</b>
Aug 23 – Aug 25	Introduction and Review (2)	Chap. 1-2
Aug 28 – Aug 30	Mass Relations and Stoichiometry (2)	Chap. 3
Sep 1, Sep 6 – 11	Aqueous Reactions (4)	Chap. 4
Sep 13 – Sep 18	Gases (3)	Chap. 5
Sep 20	Review	Cumulative
<b>Friday, Sep 22</b>	<b>Progress Exam 1 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Sep 22 – Sep 27	Enthalpy & Calorimetry (3)	Chap. 6
Sep 29 – Oct 2	Quantum Mechanical Model (2)	Chap. 7
Oct 4, Oct 9 – 11	Electron Configuration and Periodic Trends (3)	Chap. 8
Oct 13 – Oct 16	Chemical Bonding Models (2)	Chap. 9
Oct 18	Review	Cumulative
<b>Thursday, Oct 19</b>	<b>Progress Exam 2 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Oct 20 – Oct 27	Molecular Geometry (4)	Chap. 10
Oct 30 – Nov 1	Covalent Bonding Theories (2)	Chap. 11
Nov 3 – 8, Nov 13	Intermolecular Forces, Liquids and Solids (4)	Chap. 12
Nov 15	Review	
<b>Thursday, Nov 16</b>	<b>Progress Exam 3 (8:20pm-10:20pm)</b>	<b>Cumulative</b>
Nov 17 – 20, Nov 27	Properties of Solutions (3)	Chap. 13
Nov 29 – Dec 6	Chemical Kinetics (4)	Chap. 16
<b>Saturday, Dec 9</b>	<b>Final Exam (3:00pm-5:00pm)</b>	<b>Cumulative</b>

Holidays (no classes): September 4<sup>th</sup>, October 6<sup>th</sup>, November 10<sup>th</sup>, November 22<sup>nd</sup> – 24<sup>th</sup>