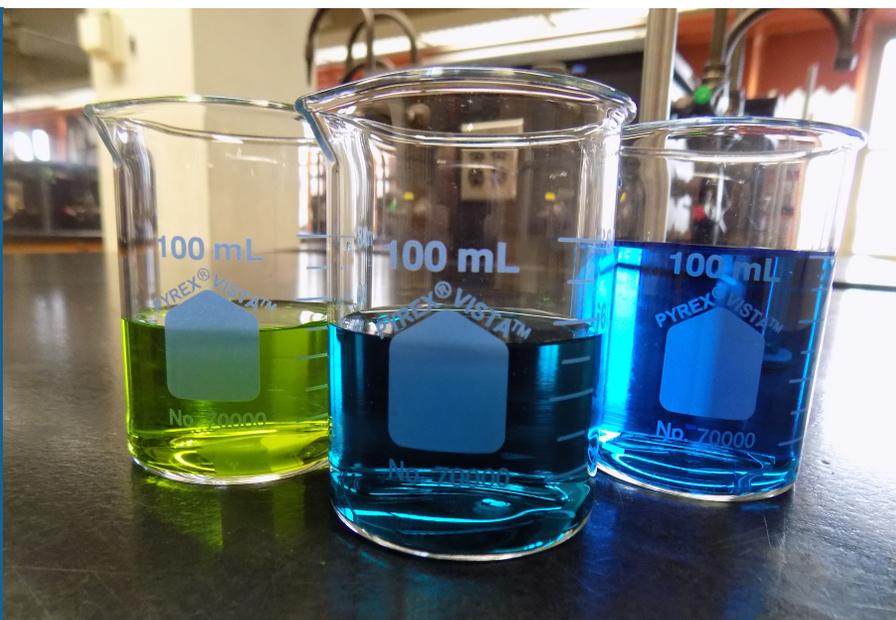


# CHEM 1081

Chemistry for Life  
Sciences I

Fall 2021

3 Credits



## Instructor

Dr. Emily Pelton  
(she/her)  
epelton@umn.edu

## Office Hours

Posted on course  
Canvas page

## Course Format

9:45 – 11 am  
TTh  
100 Smith Hall

## Course Website

<https://canvas.umn.edu/courses/267979>

## Overview

The Chemistry for Life Sciences sequence (CHEM 1081/1082/2081 and associated labs) is a three-semester sequence that was specifically designed to fulfill the chemistry needs of students with life science majors and those interested in pursuing health-related careers. CHEM 1081, with the accompanying CHEM 1065 lab, is the first semester in a three-semester sequence of courses designed to provide a strong chemistry background for students pursuing degrees and careers in the life sciences and is a combination of general and organic chemistry.

This lecture/lab pair fulfills the core physical science requirement of the liberal education requirement. A student may ask, “Why is this course considered an important component to my liberal education?” A liberal educated person is one who can understand complex issues, find credible information, analyze that information, problem-solve, and draw reasonable conclusions based on facts. In this course, these objectives are met, in part, by highlighting the experimental basis for physical theories. For example, kinetic molecular theory can be tested via experimental methods, including the measurement of pressure, volume, and temperature. The hydrogen atom emission spectrum will be used to test predictions made by atomic theory. In the co-requisite laboratory course, open-ended experiments provide you the opportunity to practice the scientific method yourself, as you will formulate, test, and refine hypotheses pertinent to the problems you are studying. This course and the 1065 laboratory will help to develop these skills and to prepare you to be an informed citizen and life-long learner.

During the term, students will complete frequent online homework assignments and participate in synchronous problem-solving sessions. There will be seven unit quizzes, and at the end of the course, students will complete a cumulative final exam.

## Prerequisites

In order to enroll in CHEM 1081, students must have either

- passed the Chemistry Placement Exam and been advised to take this course, or
- completed CHEM 1015 or an equivalent course with a grade of C- or better.

In order to register for/remain registered in CHEM 1081, you are required to be registered in both CHEM 1081 and CHEM 1065 during the same term.

If you do not meet these criteria, you must report your situation to our Student Services staff (eric1715@umn.edu) immediately, as they handle all enrollment and registration issues for the course.

## Goals

As a component of your undergraduate education here at the University of Minnesota, this course will offer you the opportunity to identify, define, and solve problems and will provide a strong foundation for the mastery of knowledge in the chemistry of life sciences.

When students leave CHEM 1081, students

- can identify, define, and solve problems;
- can locate and critically evaluate information;
- have mastered a body of knowledge and a mode of inquiry;
- can communicate effectively; and
- have acquired the skills for effective and life-long learning.

Course mastery is required because CHEM 1082 builds on content from CHEM 1081. Because the bulk of your overall course grade is determined by your exam performance, **it is essential that you are able to demonstrate this mastery during exams.**

You are responsible for managing your time and resources effectively. Homework assignments are due throughout the semester to help you keep on track. There are a variety of resources available during class and on our course website designed to help you be successful in the course. You must seek out these resources and use them effectively. If developed now, time and resource management skills will serve you throughout your college career.

## Course Materials

*All course materials are available for purchase from U of M Bookstores in Coffman Union and St. Paul Student Center.*

### Required

**Textbook and Achieve:** *Interactive General Chemistry: Atoms First*, Jessica White, Brian Anderson, Brandon Green, and Mildred Hall, Macmillan Publishing, 2019 (see sidebar)

**Access to an internet-capable computer with Google Chrome, a working webcam, and a working microphone**

**Laminated periodic table/equation sheet, whiteboard, or laminated surface:** used when you take quizzes and exams

**Dry-erase marker:** used when you take quizzes and exams

**Mirror or other reflective surface:** approximately 6" by 6"; used when you take quizzes and exams

**Non-programmable scientific calculator**

### Very Strongly Recommended

**Molecular modeling kit**

### *Inclusive Access*

This semester we will be using Macmillan's [Interactive General Chemistry: Atoms First](#) with Achieve. You can access your E-text via the Macmillan Learning link in our course Canvas site.

We are making the course material available because it is much more cost-effective than purchasing the physical book. Your student account will be charged \$48.50 before the beginning of the semester for access. Those wishing to opt out and purchase their textbook and Sapling access elsewhere are refunded after the drop/add period. All students who drop the course within the drop/add period will be automatically refunded.

An E-mail will be sent to all students with opt out instructions. The E-mail will have the subject line "Course Materials Charged on Your Student Account" and will come from verbasoftware.com. Sometimes the message goes to a spam or junk folder, so please be on the lookout for this message. Students have until September 17, 2021, to opt out of the course material. If you have additional questions, contact UMN Bookstores directly at [inclusiveaccess@umn.edu](mailto:inclusiveaccess@umn.edu).

## Course Websites

**Lecture (CHEM 1081) Canvas site.** Students registered in this course must use the Canvas site created for this class. This site is where you will find any information associated with the lecture portion of the course. It will contain a course calendar, syllabus, links to the Achieve homework site, and many resources to help you succeed in our course. All of our quizzes will be offered via Canvas as well. You will find your quiz scores posted here, under the “Grades” link.

**Lab (CHEM 1065) Canvas site.** This site is where you will find your lab syllabus and multiple resources associated with completion of the laboratory projects. You will view your laboratory grades here, under the “Grades” link. Please note that lab is a separate, graded course that must be taken at the same time you take our lecture course.

## How to be Successful in CHEM 1081

Every student defines success differently. At the beginning of the term, define your goal(s) for CHEM 1081 and make a specific, detailed plan on how to get there. If you get nothing else, take this: **Attending class and doing the online homework IS NOT ENOUGH to prepare you to do well on exams.** You must practice the material *on your own* in depth and often.

In the past, students who have been successful in the course follow these directives.

- **Be prepared for lecture.** Briefly scan the material that is going to be covered during lectures before class. It helps to have a basic knowledge of what is being discussed during lecture and can help you tailor your questions.
- **Participate in problem solving sessions.** Ask questions when you don't understand!
- **Study the material covered in class.** It is helpful to review your notes while lecture is still fresh in your mind. If there is something you do not understand, you should ask for help as soon as possible.
- **Work on assigned problems.** Chemistry can only be mastered by applying concepts learned, and the best way to do this is to work on problems! Make sure you understand the concepts presented in the chapter; afterward, attempt the problems related to these concepts. The best way to work on these problems is without the aid of the solutions manual.
- **Participate in a study group.** Study groups can be an effective way of succeeding in this course. Forming a group with 2-3 other students from the class can be a great tool for understanding what you have learned and to discover which concepts you're still struggling with. Do not go to our study group hoping to learn the material you have not studied. Instead, complete your studying and take your questions to your study group.
- **Get help early.** This class moves very quickly, and we cover a lot of material each week. If you get lost, you must be proactive about getting the help that you need, whether that means going to the tutor room or coming to office hours with questions.

## Grading

I want to encourage you to work hard in our class and give you many opportunities to demonstrate and apply what you are learning. You will demonstrate your mastery of our course material by working on online homework throughout the semester, participating in synchronous problem solving sessions, and by completing quizzes that assess your mastery of skills in our class.

Students will be evaluated based on online homework, exam reflections, and quiz/exam performance only. The grading breakdown is as follows.

<b>Achieve homework</b>		65 points
<b>Reflection surveys</b>	4 x 10 points =	40 points
<b>Quiz 1</b>		25 points
<b>Quizzes 2-7</b>	6 x 60 points =	360 points
<b>Final Exam</b>		<u>110 points</u> 600 points

A-range: 510-600 points  
 B-range: 450-509 points  
 C-range: 360-449 points  
 D-range: 300-359 points  
 F: below 350 points

For further details, please see  
[policy.umn.edu/education/gradingtranscripts](http://policy.umn.edu/education/gradingtranscripts).

## Achieve Homework

You will have regular, required assignments using Achieve, and you can expect to spend at least several hours a week working on them. These assignments are designed to help you keep pace with the material we are covering during class. You must have an active Achieve account to complete these assignments. All graded assignments will be listed and submitted online, and all assignments are due by 12 pm noon Central on the due date. Because assignments are available well in advance of the due date, *no make-up opportunities* are allowed, and there will be no extensions for failing to complete your homework on time.

Achieve homework is worth a total of 65 points in our class. If you earn at least 90% of all available Achieve homework points during the semester, you'll earn full credit (65 points), and if you earn less than 90%, you'll earn a prorated portion of credit.

## Reflection Surveys

CHEM 1081 is the first course in a three-semester sequence, and I want you to develop strong study strategies and time and resource management skills that will serve you in this course and beyond. To this end, you will complete an introduction survey at the beginning of the semester and three reflection surveys throughout the term that will help you identify what's going well and what changes you might want to make to change your trajectory. These surveys will be completed through Achieve, and points are earned by completing each item.

## In-Class Activities

During class meetings, we will be employing a variety of in-class activities, including (but not limited to) demonstrations, in-class writing, problem-based learning, and quizzes. These activities are designed to help you engage in the class and master the course material. By diligently working on these problems during class meetings, you will be able to assess your mastery of the material and where you need more study.

### Can I record demos?

No. In-class demos are like going to a concert – you want to experience the demo in real life, not from behind a screen.

## Mask Expectations

As of the writing of this syllabus, everyone is required to wear a mask while indoors while on campus. Because our class meetings will be held indoors, **you are required to wear a mask that meets the University's requirements during our class sessions.** Your mask must be properly fitted to cover your nose and mouth, wrap under the chin, and must not have any noticeable gaps. Additionally, you should carry two masks with you at all times to account for the possibility that a mask might be lost or spoiled. For more information, including what qualifies as a mask, please see: <https://safe-campus.umn.edu/return-campus/face-coverings>. To help ensure masks are worn at all times while in our classroom, eating and drinking during class is not permitted.

## Calculators

**Acceptable calculators.** Any one-line display scientific calculator is allowed. The TI-30Xa is the suggested calculator for this and all CHEM 1XXX courses and for most introductory physics courses. The TI-30X IIS is an acceptable two-line calculator. These calculators are available in the U of M Bookstores. Many other two-line calculators are programmable and would therefore *not* be allowed. If you are concerned about whether or not your calculator would be acceptable, you could purchase the recommended calculator for the course, just in case.

**Calculators during quizzes.** Calculators may not be shared during quizzes. If you are concerned about battery failure during the quiz, bring a second calculator or extra batteries with you. In addition, the Proctorio system has a built-in calculator feature that you can use during quizzes.

### Can I use my graphing calculator?

No. Graphing and/or programmable calculators are FORBIDDEN on quizzes or the Final Exam. Their presence during, or use on, an exam will be considered cheating. Only non-programmable calculators with limited memory will be allowed for use during quizzes and the Final Exam.

## Quizzes and the Final Exam

**Locations.** You can take your quizzes and Final Exam in any quiet, private or semi-private location of your choosing, as long as it has reliable, stable internet access for the duration of your quiz. You can take the Proctorio Setup Quiz as many times as you'd like; many students find it helpful to take the Setup Quiz before graded quizzes so that they can ensure their location is ready to go.

**Times.** The quiz window will open each week on Thursdays at 12 pm noon Central and close Fridays at 12 pm noon Central. There is no time limit on quizzes, but you must complete the entire quiz in one continuous session. I strongly encourage you to **begin your quiz no later than 9 am on quiz days** to help ensure you have time to complete your quiz and help account for any technical difficulties you may encounter. I won't always be available to help with quiz questions or technical issues after 9 am on quiz days, so please plan accordingly. In addition, the Proctorio Information tab on Canvas gives the steps you should follow if you run into issues on quizzes. It is expected that, if you encounter *any* technical issues related to quizzes, you will first follow *all* of the steps posted there. You will not be able to access any quizzes after 12 pm noon Central on quiz days.

All quizzes and the Final Exam will be proctored electronically in Canvas using Proctorio. The final exam window will be open from 8 am Central on Tuesday, December 21, to 10 am Central on Wednesday, December 22. You can take quizzes in any quiet, private or semi-private location with a stable internet connection. **Adjust your schedule NOW, and plan any travel, weddings, employment opportunities, meetings, etc. around these quiz dates and times.** If you have conflicts with any of these quiz dates and times, you should resolve them immediately or drop the course.

All quizzes, including the Final Exam, will be given ONLY at the scheduled dates and times. *No make-up quizzes or alternative quiz dates* are an option under any circumstances. If you are enrolled in a UMN course with a time conflict, you must submit a course conflict form. The Final Exam must be completed in order to earn a letter grade other than F in the course.

**Format.** Quizzes will consist of multiple choice, short answer, fill-in-the-blank, and matching questions and will cover material as outlined in the course calendar. The quizzes will be proctored and graded by a computer. **Make sure you fully understand how to set up your computer and prepare for E-proctoring in advance of the actual quiz (details are provided on Canvas).** The Final Exam will be cumulative and cover all material presented in the course.

**Materials.** You must have your U-Card or a photo ID, periodic table/equation sheet, dry erase marker, and a mirror at each of the quizzes and the Final Exam. All quizzes and the Final Exam are closed book and closed note, and no study aids, model kits, or external resources are permitted. No smart phones, cell phones, programmable calculators, or other such electronic devices may be used at any time. Only non-programmable, non-graphing calculators are allowed (see specific Calculators policy) and remember, a calculator is provided within the Proctorio system for use during quizzes if you'd prefer.

**Quiz regrades.** After the quiz window closes (generally Friday afternoons), you will be able to review your quiz and how it was graded. Regrade requests must be submitted within seven days of quiz score posting, via E-mail directly to the instructor, and include the question number and an explanation as to why you are requesting a regrade (including chemical rationale if applicable).

**Missed quizzes.** In situations of a true emergency, serious illness, or University-sponsored travel, an excused absence may be granted for a quiz. To obtain an excused absence, students must contact the instructor as soon as circumstances allow to discuss the nature of the emergency and to arrange for documentation. The unweighted average of all the student's other quiz scores will replace the zero from the excused quiz. Only one missed quiz will be replaced in this fashion. If circumstances prevent a student from taking more than one quiz, a meeting must be scheduled immediately with the instructor to discuss any options available. Student-athletes with a travel letter who miss a quiz due to University-related travel should also contact the instructor early in the semester to determine what arrangements may be able to be made. For more information, please see: <http://policy.umn.edu/education/makeupwork>.

### Quiz dates

*All chapter quizzes are due by 12 pm noon Central on the date listed.*

*The Final Exam is due by 10 am Central on the date listed.*

<b>Quiz 1</b>	September 10
<b>Quiz 2</b>	September 24
<b>Quiz 3</b>	October 8
<b>Quiz 4</b>	October 22
<b>Quiz 5</b>	November 5
<b>Quiz 6</b>	November 19
<b>Quiz 7</b>	December 10
<b>Final Exam</b>	December 22

## Grading Policies

**S/N grading.** If you are registered for this class on an S/N basis, a grade equivalent to C- or above on the A-F scale will be required to earn an S, and a grade equivalent to D+ or below will earn an N. Many programs and transfer courses do not like S/N grading and will assume it represents the minimum possible grade. Monday, September 20, is the last day to change the grading basis for the semester.

**Incompletes.** Students who have an excused absence from the Final Exam *and* have taken all midterm exams may be eligible to earn a grade of I in the course. Incompletes will *not* be granted if the student is not passing based on the work up to the Final Exam. This grade is NOT routinely assigned. Any grade of I must be made up the next semester CHEM 1081 is offered. After that time, all grades of I will become grades of F. You must fill out an Incomplete Request form (available from [eric1715@umn.edu](mailto:eric1715@umn.edu)) and have it signed by the student, the instructor, and a third party within 48 hours of the Final Exam. See your instructor for details.

*Is there extra credit?*

There is no extra credit in CHEM 1081.

**Withdrawals.** If you decide to drop the class, you must officially withdraw from the course following the specific rules of your college. Please know that students withdrawing from the course will not have any records retained for use upon retaking the course. If you are considering withdrawing from the course for academic reasons, I urge you to come and talk with me during office hours. Your situation may not be as bad as you think it is.

## Tutoring

**General chemistry tutor room.** General chemistry tutors are available for free on a drop-in basis during the semester via Zoom (the schedule is posted on our course Canvas page). The tutors are there to help you learn and not to simply give you answers. The tutors are actually instructed to ask *you* questions that will help you understand what concept you are missing that is preventing you from solving a particular problem. Solving the problem yourself with a tutor's guidance will enhance the depth and retention of your knowledge.

It is important to me that your time is well spent in the tutor room. If tutors are not present at scheduled times, are not helpful, or if they leave for extended periods of time, please let the Head General Chemistry TA ([genchem@umn.edu](mailto:genchem@umn.edu)) or me know immediately.

**Private tutors.** A list of people available for hire as private tutors is available on our course Canvas site, if this is something you're interested in.

## Course Policies

### Late registration

Please be advised that joining the course after the start of classes does not excuse you from attendance and/or any work collected and/or graded. You should give careful consideration to this prior to late addition (after the first day of classes) to our course.

### Overlapping and back-to-back courses

Enrolling in overlapping or back-to-back courses that do not allow enough travel time to arrive at class meetings (including exams) on time is prohibited. For more information, see <http://policy.umn.edu/education/overlappingclasses>.

### Student conduct code

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see: [http://regents.umn.edu/sites/default/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf).

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

### Sexual harassment

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult the Board of Regents policy: <http://regents.umn.edu/sites/regents.umn.edu/files/policies/SexHarassment.pdf>.

## Appropriate student use of class notes and course material

Lecture videos in our course will be used for educational purposes only for the students enrolled in our class this term. Similarly, taking notes is a means of recording information and personally absorbing and integrating the educational experience.

Students must receive explicit instructor permission in order to share lecture videos, course content, quizzes, lecture materials, etc.

Disseminating class notes and materials (including exams, lecture videos, practice exams, worksheets, handouts, etc.) beyond the classroom community and/or accepting compensation for taking and/or distributing class notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning.

Uploading an instructor's work and/or using work from an outside resource or website is likely a violation of the Student Conduct Code. Such actions violate shared norms and standards of the academic community. For additional information, please see <http://policy.umn.edu/education/studentresp>.

## Use of personal electronic devices in the classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. For complete information, please reference <http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

## Mental health and stress management

As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health website: <http://www.mentalhealth.umn.edu>.

Many international students and scholars experience difficulty during their stay in the US, and International Student and Scholar Services ([www.iss.umn.edu](http://www.iss.umn.edu)) office is available to help.

## Equity, diversity, equal opportunity, and affirmative action

The Department of Chemistry is united in the belief that diversity in all of its forms is good. Collaboration among people of all cultures and backgrounds enhances our experience as scientists and contributes to excellence in teaching, learning, and research. We strive to promote a climate that celebrates our differences and strengthens our department by embracing and working to increase our diversity.

The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: [http://regents.umn.edu/sites/default/files/policies/Equity\\_Diversity\\_EO\\_AA.pdf](http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf).

## Issues with your instructor

On occasion you may have a concern or problem regarding this course. You will find your instructor quite willing to discuss this with you. If, however, you wish to discuss it with someone other than your instructor, please contact Prof. Angela Perkins, Director of Chemistry for the Life Sciences, at [aperkins@umn.edu](mailto:aperkins@umn.edu). She will serve as a mediator in helping to resolve the issue.

## Student workload expectations per undergraduate credits

For fall and spring semester, one credit represents, for the average University undergraduate student, three hours of academic work per week, averaged over the term, in order to complete the work of the course to achieve an average grade. One credit equals 42-45 hours of work over the course of the term (1 credit x 3 hours of work per week x 14 or 15 weeks in a semester = 42 to 45 hours of academic work. Thus, enrollment for 15 credits in a term represents approximately 45 hours of work per week, on average, over the course of the term.

## Disability accommodations

The University of Minnesota views disability as an important aspect of diversity and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attention, learning, chronic health, sensory, or physical), please contact DRC at (612) 626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with Disability Resource Center and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DRC website, <https://diversity.umn.edu/disability/>.

## Academic freedom and responsibility

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.\*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help: your instructor, the department chair, your academic advisor, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost. See the Board of Regents policy for further information: [http://regents.umn.edu/sites/regents.umn.edu/files/policies/Academic\\_Freedom.pdf](http://regents.umn.edu/sites/regents.umn.edu/files/policies/Academic_Freedom.pdf).

\* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

## Scholastic dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. Please see the Student Conduct Code ([http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf)) for more information. If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/education/instructorresp>.

The Office for Community Standards has compiled a useful list of FAQs pertaining to scholastic dishonesty: <https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-dishonesty>.

## COVID-19

As of the writing of this syllabus, the University of Minnesota requires all students, staff, and faculty to wear masks when indoors, regardless of vaccination status, and strongly encourages members of the campus community to get vaccinated. Resources are available for accessing vaccines.

Please stay at home if you experience symptoms of COVID-19 and consult with your healthcare provider about an appropriate course of action. An absence from a quiz due to symptoms of COVID-19 is eligible for an excused absence.

People who are not vaccinated are at high risk for getting and spreading SARS-CoV-2, the virus that causes COVID-19. New variants of the virus spread more easily and quickly, particularly among young adults, which may lead to more cases of COVID-19 among college students this fall. An increase in the number of COVID-19 cases will strain healthcare resources and lead to more hospitalizations and potentially deaths.

The best defenses against contracting COVID-19 and spreading the virus to others are vaccination and masking. All members of the University community who can be vaccinated are strongly encouraged to get vaccinated. Visit <https://safe-campus.umn.edu/return-campus/get-the-vax> for resources on how to get vaccinated.

When indoors, you are currently required to wear a face covering (mask) to protect the entire community of students, faculty members, and staff. This will maintain a culture of safety to help protect all members of the community, and especially those who are immunocompromised and/or who are caretakers of others (e.g., young children), including those who cannot yet be vaccinated. Visit <https://safe-campus.umn.edu/return-campus/face-coverings> for more information.

If you experience COVID-19 symptoms or symptoms of any potentially infectious respiratory illness (e.g., fever or chills, cough, shortness of breath or difficulty breathing, new loss of taste or smell, sore throat, congestion or runny nose), you should stay home or in your residence hall room and not come to class. Please consult with your healthcare provider about an appropriate course of action, and please consult the M-test program for COVID testing resources.

Note that pandemic guidelines update regularly in response to guidance from health professionals and the prevalence of the virus in our community. You will be notified of any changes at <https://safe-campus.umn.edu/return-campus/covid-19-updates>.

# Class Schedule

Homework and Quizzes are due by 12 pm noon Central.

Quiz 1

*Review prerequisite knowledge  
on your own*

Review & Math Review HW  
Due by September 9

Quiz 1

*Review Material*  
Due September 10

Quiz 2

Chapter 3 (Sections 1-6)

Compounds and the  
Mole

HW Due by September  
16

Chapter 4

The Quantum Mechanical  
Model of the Atom

HW Due by September 23

Chapter 5

Periodicity and Ionic  
Bonding

HW Due by September  
23

Quiz 2

*Chapters 3-5*  
Due September 24

Quiz 3

Chapter 6

Covalent Bonding

HW Due by  
September 30

Chapter 7 (Sections 1-4)

Molecular Shape and  
Bonding Theories

HW Due by October 7

Quiz 3

*Chapters 6-7*  
Due October 8

Quiz 4

Chapter 10

Thermochemistry

HW Due by October  
21

Quiz 4

*Chapter 10*  
Due October 22

Quiz 5

Chapter 11

Gases

HW Due by October 28

Chapter 12 (Sections 1-6)

Liquids and Solids

HW Due by November 4

Quiz 5

*Chapters 11-12*  
Due November 5

Quiz 6

Chapter 13

Solutions

HW Due by November  
11

Chapter 8 (Section  
8.3)

Chemical Reactions  
and Aqueous  
Solutions

Chapter 9  
(Sections 5-6)

Stoichiometry

Chapter 18

Chemical  
Thermodynamics

HW Due by November  
18

Quiz 6

*Chapters 13 & 18*  
Due November 19

Quiz 7

Chapter 15

Chemical  
Equilibrium

HW Due by  
December 2

Chapter 17

Aqueous  
Equilibria

HW Due by  
December 9

Chapter 9  
(Section 4)

Stoichiometry

Quiz 7

*Chapters 15 & 17*  
Due December 10

**Final Exam:** Due by Wednesday, December 22 at 10 am