CHEM 1420.004 – General Chemistry II for Science Majors

Spring 2026

Instructor: Dr. Sophie Kinyanjui (sophia.kinyanjui@unt.edu)

Session	Days	Time	Location
CHEM 1420.004 (Lecture)	MoWeFr	1:00 pm – 1:50 pm	Wh 122
CHEM 1420.004 (Recitation)	Fr	2:00 pm – 2:50 pm	Matt 311
Office Hours	Mo	10:30 am – 11:30 am	CHEM 164
	Fr	9:30 am – 10:30 am	CHEM 164
(other time by appointment)	We	2:00 pm – 3:00 pm	CHEM 164

Communication Expectations

Coming to my drop-in help or office hours is very effective in getting immediate feedback. Otherwise, it is best to reach me through email (sophia.kinyanjui@unt.edu) which you can also access through Canvas with any questions, comments, or concerns.

I also routinely communicate with the class as a whole through announcements in Canvas. Be sure to set up your Canvas page so that you receive push notifications of changes made to the page!

Course Description

This course is for science and science-related majors. It is a continuation of Chemistry 1410. This class is math heavy. Most of what you will do is calculations. So, having a scientific calculator is a must! You will be required to remember a lot of the material that you learnt in General Chemistry 1 as well. So, if you have time to review topics such as naming of chemicals, the formulas of common compounds, polyatomic ions, drawing Lewis structures, solubility rules, balancing equations, and mole calculations, limiting reactants, this will come in very handy. Topics covered in this course
include colligative properties of solutions, chemical thermodynamics, chemical equilibrium, modern acid-base theory, buffers, solubility, electrochemistry, reaction kinetics, and nuclear chemistry.

Course Prerequisites or Other Restrictions

Pre-reqs: **Course Description**
Grade of "C" or better in CHEM 1410 (General Chemistry I) or equivalent.

Co-Reqs: While it is not required, it is strongly encouraged that you enroll in CHEM 1440 (General Chemistry II lab). If you are not required to take the lab or you otherwise cannot do so this semester, you will be just fine.

- CHEM 1440 is the laboratory course, and it is a separate course from CHEM 1420. Students will receive separate grades for the two courses. Dropping either course does NOT automatically drop you from the other course. For lab classes, be aware that you should be registered for both a lab lecture course (CHEM 1440.00x) and a lab (CHEM 1440.4xx).

Course Objectives

At the completion of the course, students should be able to:

- describe the energetics of phase changes, heating curves and phase diagrams. Calculate the energy involved in any given series of phase changes.
- demonstrate an understanding of the colligative properties of solutions and their mathematical expression.
- demonstrate an understanding of the nature of acids and bases, both "weak" and "strong".
- use the concepts of thermodynamics to predict the spontaneity of processes, as well as the changes in free energy, entropy, and enthalpy.
- demonstrate an understanding of the concept of chemical equilibria and its application to gas phase equilibria, heterogeneous equilibria, acid-base equilibria, and solubility; show the relationship between free energy and equilibrium constant
- demonstrate an understanding of the basic concepts of electrochemistry and be able to use standard reduction potentials to calculate quantities involved in an electrochemical reaction; relate free energy, equilibrium constant, and cell potential
- demonstrate an understanding of chemical kinetics and the relationship to reaction mechanisms and be able to perform calculations related to the rates of chemical reactions.
- write nuclear symbols for nuclides and subatomic particles and explain the differences between nuclear and chemical reactions
- define nuclear fusion and fission, balance nuclear reactions and use kinetics of radioactivity to solve problems.

Required Materials

ELECTRONIC TEXTBOOK:

Chemistry, Atoms First, 2nd Ed.

- Link to textbook: https://openstax.org/details/books/chemistry-atoms-first-2e
- If you bought a textbook, I encourage you to return it for a refund! You only need the e-book above.

HOMEWORK/QUIZZES/EXAMS:

All can be accessed directly in Canvas. Most Homework is paper based, lecture review quizzes will be mostly taken in Canvas and Exams will be taken at the SAGE Hall Testing Center through canvas. Lecture quizzes will be taken on paper in class, for the most part.

CALCULATOR:

Preferred: TI-30 series, or any equivalent Scientific Calculator

- Bring your calculator to every class, quiz, and exam.
- *Practice* using your calculator!
- If you already have a TI-80 series calculator (or any other graphing calculator), you can still use that.

My Teaching Philosophy – The importance of Goal setting

I believe that everyone can succeed in chemistry, regardless of what you may have heard before. I find chemistry endlessly interesting and my goal in this course is to introduce you to some of that fascination. I want you to learn the foundations of chemistry that you will carry with you through other chemistry courses, as well as into your everyday life. I have tried to ensure that the material on this course is presented in several different ways, from reading to videos to interactive simulations. I want you to *think* about the material and learn how to apply the knowledge you are gaining to solve chemical problems. I do not want you to simply memorize and regurgitate information on exams. You don't learn anything through simple memorization.

Goal setting is a very important step in ensuring your success in any undertaking. I would like you to pause here and think about the grade you want to make in this class. Many of my students want to get A grades in all their classes. Some want to make B grades and a few just want to survive and therefore consider a C grade sufficient for their purposes. I make no judgment about what you have chosen for yourself. My job is to support you in achieving the goal that you set for yourself. So, I would like you to be very honest with yourself and write down the grade you want to make in this class on a plain piece of paper.

Now, if you never get up and start walking towards your goal then you will never achieve it. So, you will need to set your second goal which is to work diligently towards achieving the first goal throughout this semester. In fact, go ahead and write your desired grade on more pieces of paper and stick them to the fridge, to the bathroom mirror, and on your desk. You may even make this letter grade the screen saver on your cell phone and on your computer. Let everything around you remind you of your goal, and purpose to walk towards this goal every moment of the semester. If you find yourself playing a computer game, or doing something random, simply ask yourself, "Is this taking me towards my goal?" If it is not, then just gently turn away from it and continue walking towards your goal. Practice this every day without fail.

So, what is the best strategy that has proven to ensure success in this class? I can tell you it is groupwork. I know that many of you do not like talking to anyone, let alone trying to study with them. Nevertheless, you will find that the material covered in this class is so much, and it can get quite confusing and overwhelming. Besides, there are concepts that you must recall exactly in order to help you solve problems involving new concepts. This is why teamwork is so important. Besides giving you a variety of perspectives on difficult concepts which will help you remember them more easily, you get an opportunity to explain the concepts that you have already internalized to your peers which helps to cement them in your mind. If you can articulate a concept so well that someone else understands it, that is clear evidence that you understand it. So, teamwork helps you practice what you already know by giving you an opportunity to teach it to others. And teaching is the best way to learn. I honestly cannot overemphasize the significance of groupwork and study groups in any science course. It is almost impossible to succeed in science courses without leaning on other classmates. So, please make it a priority to join a study group, or create one ASAP.

You see, I believe in you and in your ability to succeed. I believe that you are able to achieve any goal that you set your mind to as long as you keep walking towards it without getting overly distracted. I would like you now to believe in yourself and to focus on achieving your goals for this semester. Tell yourself that you can do it. Remind yourself every day that you can do it. Do not let anyone tell you that you cannot do it. If they do, just tell them, "Just watch me, and I will show you." Remember. All you have to do is to keep thinking about your goal every moment and simply keep walking towards it. You do not have to struggle. You just need to keep working on every assignment, keep up with the readings and every homework assignment and quiz on a daily basis. If you get distracted for a moment, that is ok. Just notice it, gently turn from it, and keep working on the course materials.

16 weeks is such a short time. Before you know it, the semester will be over. And….. You will have either achieved your goal….. or not. It entirely depends on you and the decisions you make. Most importantly, believe in yourself.

I suggest that you write yourself a weekly schedule for all your classes, including all the required face-to-face class times, study time, any upcoming assignments, and things of that nature. Do not forget to schedule yourself time to eat, sleep, and to do whatever else you need to stay healthy!

Then set your intention to succeed. You can do it!

Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: http://www.unt.edu/helpdesk/index.htm
Email: helpdesk@unt.edu
Phone: 940-565-2324
In Person: Sage Hall, Room 130
Walk-In Availability: 8am-9pm
Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

For additional support, visit Canvas Technical Help (https://community.canvaslms.com/docs/DOC-10554-4212710328)

CLASSROOM BEHAVIOR

Classes will begin/end as noted at the beginning of the syllabus; if you are late to class or anticipate having to leave early, please sit as close to the door as possible to minimize the disruption to the rest of the class. Disruptive behavior (such as talking, giggling, snoring, talking on a cell phone, playing on the Internet, watching YouTube or other social media videos, texting, etc.) will not be tolerated. Cell phones should be silenced during class. A student engaged in disruptive behavior can be asked to leave class immediately and can be suspended from class for a period of up to a week for the first offense, and longer if the behavior persists. The Code of Student Conduct can be found at deanofstudents.unt.edu/conduct.

No headphones, earpods, earbuds, Airpods, etc. (bluetooth and/or wired) are allowed while in class (lecture and recitation), unless you have an approved accommodation to have them. If this is the case, please see the Office of Disability Access (ODA) to ensure that the appropriate paperwork has been filed. https://studentaffairs.unt.edu/office-disability-access. (It is literally my job to teach you. Please, please, please communicate your needs to ODA and myself so I can do this effectively!)

Additionally, you should NOT be on TikTok, BeReal, Snapchat, YouTube, Instagram, Facebook, or any other social media platform while in class.

UNT ACADEMIC INTEGRITY POLICY

Academic Integrity Standards and Consequences.

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

Academic dishonesty and/or cheating will not be tolerated, and an automatic grade of "F" (a zero grade) will be given for that particular assignment or test. Additionally, the incident will be reported to the Dean of Students, who may impose further penalty. The term "cheating" includes, but is not limited to

(a) The use of any unauthorized assistance when taking exams, such as class notes, talking to another student, using cell phones, tablets, smart watches, or any other electronic gadget.

(b) Acquisition, without permission, of tests, notes, or other academic material belonging to a faculty member of the University.

(c) Any other act that is designed to give a student an unfair advantage.

ASSESSMENT & GRADING

Possible Points for Semester/Grading Scale = 1000

1000-900 = A	699-600 = D
899-800 = B	<599 = F
799-700 = C	

i.	Lecture Review Quizzes	50
ii.	Chapter Homework	200
iii.	Recitation Assignments	100
iv.	Lecture participation	50
v.	Midterm Exams (4 x 100 %)	400
vi.	Final Exam	200
	Total points	**1000**

Assessments

- 24 weekly quizzes (online through Canvas) - 50 points total, all quiz grades will be averaged together, lowest 4 will be dropped; 5 % of overall grade.
- 12 weekly Homework assignments paper worksheets - 200 points total, all quiz grades will be averaged together, lowest 2 will be dropped: 20 % of overall grade.
- Lecture participation – You will earn points for participating in the group quizzes given in lecture; lowest 4 will be dropped; 5 % of overall grade.
- Recitation assignments - There will be a paper recitation worksheet and a recitation quiz during every recitation for a total of 100 points; 10 % of overall grade.
- 4 mid-term exams - 100 points each (the lowest one will be dropped and the second lowest will be replaced by half of the Final grade), 400 points total - 40 % of overall grade.
- 1 cumulative final exam - 200 points, 20 % of overall grade

Extra Credit

You'll earn 2 extra credit points for every 90-minute PLTL session you attend, up to a maximum of 2 sessions a week for a maximum of 30 extra credit points in the semester.

The PLTL will keep a record of your attendance, but you need to maintain your own record too. Please don't ask me how many times you've attended so far, because I'll not know until I get the records at the end of the semester.

Examination Policy

There will be **FOUR** 70-minute exams with 20 multiple-choice questions plus 2 bonus questions for extra credit. Each exam will have 100 points possible. At the end of the course, your average will be calculated after replacing the lowest of the four semester exam grades with half of the Final exam grade (if it is to your advantage). If a student receives a "0" because of cheating, that grade ***cannot*** be replaced. These exams will take place on **Wednesdays**. All exams must be taken as scheduled, on the calendar dates (see Page7/8). There will *not* be any makeup exams (unless there is a *well-documented* serious illness, requiring hospitalization, or a university excused absence).

All the semester exams will be taken at the SAGE Hall Testing Center (3rd floor, rooms 332, 333, 334 or 335). When you show up, the proctors will direct you to the appropriate room. The rooms have been reserved for the time window 9:00 am to 3:00 pm on the Exam days. Since this is a timed exam, as long as you begin the exam before 3:00 pm, you will be able to finish it. The Testing Center closes at 5 pm, so you'll have plenty of time.

You will be able to "drop-in" during this time window to take the exams. You are expected to bring the following items to each exam: a writing utensil (preferably a pencil with a good eraser) and a scientific calculator. Scratch paper will be provided**. Personal cell phones, smartwatches, tablets, laptop computers, headphones/earbuds/Airpods, and any other electronic devices will NOT be allowed. Their use during an exam is strictly prohibited.** You must place them in your backpack/bag which you stow away on the shelves on the back wall of each exam room. If you are caught using any electronic gadget or a cheat sheet during the exam, you will be asked to leave the room and receive a zero on that exam.

Final Exam (20%)

The final exam will be 120 minutes for this course and will be cumulative (covering all the material in the course), and it must be taken on the scheduled date (which is a Saturday! Please make note of this). You will *NOT* be allowed to take this final outside of this window of time. More details about the final will be given throughout the semester. The final exam will also be taken at the Testing Center. You will be able to "drop-in" during the time window listed for the final exam, just like your regular-semester exams.

Late Work

Late work, homework, quizzes, and exams will not be accepted beyond the deadlines except for university excused absences and extremely extenuating circumstances, which I reserve the right to define). There will be no makeup exams for missed exams. The Final will replace the lowest exam grade if it is higher than the exam grade. **If you have a valid reason for missing a mid-term exam then, you must email me ASAP. I get to decide the validity of your reasons.** A missed exam (without excused absence) earns a zero grade, which is eligible to be replaced by the Final exam. Under extremely extenuating circumstances, I may give a makeup exam or extend due dates for assignments. So please let me know your reasons for missing an exam so that I'm able to decide what we need to do about it.

Some very limited concessions will be provided as per the advice of the office of the Dean of Students due to COVID issues and other matters that are traditionally arbitrated by the Dean of Students. So, if you have any COVID related issues, religious holidays, or debilitating family, mental or emotional issues, **you MUST report them FIRST to the Dean of Students' office**, then to the instructor of record.

For absences due to religious holidays which you are aware of ahead of time, you must talk to me about them at the beginning of the semester. Otherwise, the absence will **NOT** be excused if you tell me about it either after the fact or on the day of. This also applies to scheduled surgeries, doctor's appointments and work-related or University related travel that you know about ahead of time.

Class Attendance

Research has shown that students who attend class regularly are more likely to be successful. You should attend every class unless you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the Student Attendance and Authorized Absences Policy (PDF) (https://policy.unt.edu/policy/06-039). If you cannot attend a class due to an emergency, please let me know within reasonable time. Your safety and well-being are important to me.

Attendance will be taken and there will be group activities that will be turned in for a grade during every lecture. Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course as per UNT policy. It is important that you communicate with the professor and the instructional team prior to being absent, so you, the professor, and the instructional team can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and instructional team if you are unable to attend class meetings because you are ill, or in mindfulness of the health and safety of everyone in our community.

If you are experiencing any symptoms of COVID-19 please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

Please Get Help!

If you have questions about anything at all, or are confused about anything at all, or if you just need someone to hold your hand and tell you that everything will be ok, please do not hesitate to reach out either to the instructor or any of the other class TAs or PLTLs. Below is the list of the staff that you may reach out to at any time.

Other Assistance

1. Instructor's Drop-in Help/Office hours:
2. Chemistry Resource Center (CRC): CHEM 231 – MoTuWeFr to 8am-6pm, Thurs. 8am-3pm –staffed by Chemistry graduate students. For more information visit: https://chemistry.unt.edu/undergraduate-program/instructional-resources
3. ***The Computational Chemistry Instructional Laboratory (CCIL)***: CCIL provides computer access to all undergraduate and graduate students enrolled in UNT chemistry courses. Computers are to be used only for chemistry related work and instruction. The CCIL is staffed by chemistry graduate students knowledgeable in the area of computational chemistry.
   More information about CRC and CCIL can be found at this website (https://chemistry.unt.edu/undergraduate-program/instructional-resources).
4. Undergraduate Teaching Assistants (PLTL) - one or two 90-minute meetings per week.
   –These are small study groups working collaboratively on challenging course content problems, guided by a peer leader.
5. Graduate Teaching assistants (TA) (See PLTL/TA resources in Canvas for contact emails)

Drop-In Help (Student Hours / Office Hours)

Drop-in student hours (or "office hours") are times that Dr. Kinyanjui (or the TA) is in her office, with her door open and ready to talk to you! Feel free to ask questions about the material being covered in class or anything else about chemistry. If you show up during the times listed above, you do NOT have to make an appointment or let us know that you are coming. If you cannot make those times, for whatever reason, send us an email and we can make an appointment.

Regarding dissemination of information, I exclusively use Canvas to message the entire class with reminders of deadlines, changes to classroom policies, etc. In addition, I will post ALL the lecture notes and grades on Canvas. Please make it a habit to check Canvas (and your UNT email) at least twice a week. I will not respond to email received from non-UNT email addresses, especially concerning grade information. With a personal email address, I cannot be certain it is you on the other end. As such, please only use your official UNT email address to email me.

Incomplete Grade

An incomplete grade (I grade) is only given if the student meets the requirements set forth by the university. The incomplete grade for the course is only given during the last one-fourth of a semester and only if a student: (1) is passing the course; (2) has justifiable reason why the work cannot be completed on schedule; and (3) arranges with the instructor to finish the course at a later date by completing specific requirements that the instructor must list on the electronic grade roster. An I grade may not be used to replace a failing grade. All work on the course must be completed within the specified time (not to exceed one year after taking the course). For additional information visit the Office of the Registrar's website at https://registrar.unt.edu/grades/incompletes

Instructor Responsibilities and Feedback

I will do my best to present the material in this class to you in a way that helps you understand the common threads linking it all together. I promise that I will do my best to help you be successful on this course. I will be available to you for questions, I will provide timely feedback on your work, and I will make sure that this course is an open, safe, and inviting place to learn chemistry.

Feedback on performance can be provided at any time through office hours, or a scheduled appointment outside of posted office hours. In the event that assignments are hand graded, the grades will be uploaded to Canvas within a week of the due date.

Syllabus Change Policy

In the event that any aspect of this course changes, the updated syllabus will be posted in Canvas. In addition, an announcement will be posted on Canvas and if possible, an announcement made verbally about it in class.

Preliminary Lecture Schedule (subject to change)

This is a tentative class schedule that may be modified, based on the class's progress during the semester.

Week	Date	Material
1	M, Jan 12 W, Jan 14 F, Jan 16	Introduction. Syllabus. Canvas. Good study habits. Chapter 10: **Liquids and solids**: IMF trends and trends in bp Chapter 10: Surface tension, viscosity, vapor pressure, Clausius-Clapeyron calculations, phase Changes
2	M, Jan 19 W, Jan 21 F, Jan 23	**ML King Day Holiday – No Classes** Finish Chapter 10 **–** Heating curve calculations, phase diagrams Chapter 11 **Properties of Solutions:** Factors affecting Solubility, Henry's law
3	M, Jan 26 W, Jan 28 F, Jan 30	Chapter 11: Dissolution process and miscibility Chapter 11: Concentration units' calculations Chapter 11: Colligative properties – VP lowering and FP depression
4	M, Feb 2 W, Feb 4 F, Feb 6	Finish Chapter 11: BP depression and Osmotic pressure **Exam 1: Chap 10 & 11,** drop in 9:00am–3:00pm in SAGE 332 Chapter 12: **Entropy and Gibbs Energy: Spontaneity and trends in entropy**
5	M, Feb 9 W, Feb 11 F, Feb 13	Chapter 12: 2nd and 3rd Laws of Thermodynamics calculations, Gibbs energy intro Chapter 12**:** ΔG and Spontaneity and Temp. Calculations of ΔG^o_{rxn} Chapter 12: More Calculations of ΔG^o_{rxn}
6	M, Feb 16 W, Feb 18 F, Feb 20	Chapter 13: Equilibrium: Dynamic equilibrium, compare Q and K Chapter 13: Homo- and Heterogeneous equilibrium, Compare K_c and K_p Chapter 13: Le Chatlier's principle
7	M, Feb 23 W, Feb 25 F, Feb 27	Chapter 13: Intro to ICE tables predict rxn direction. Calculate equilibrium concns Chapter 13: Equilibrium calculations with *x is small* approximations Chapter 13: Solving quadratic eqns, Nonstandard ΔG_{rxn}
8	M, Mar 2 W, Mar 4 F, Mar 6	Chapter 14: **Acid- Base Equilibria**: Bronsted Acids and Bases, pH, pOH, Ka **Exam 2: Chap 12 & 13,** drop in 9:00am–3:00pm in SAGE 332 Chapter 14: Find pH from Ka, and vice versa, Kb, Find pH from Kb
		SPRING BREAK Mar 9th – 15th – NO CLASSES
9	M, Mar 16 W, Mar 18 F, Mar 20	Chapter 14: Acid strength, % ionization, Ka/Kb relationship, Acidic/basic salts Chapter 14: pH of a salt, polyprotic acids, Buffer solutions Chapter 14: pH of a buffer solution, on addition of a strong acid or base
10	M, Mar 23 W, Mar 25 F, Mar 27	Chapter 14: Titration calculations Chapter 15: **Equilibria of other reactions** Chapter 15: Titration Calculations
11	M, Mar 30 W, Apr 1 F, Apr 3	Chapter 16: **Electrochemistry: Balance redox reactions** **Exam 3: Chap 14 & 15,** drop in 9:00am–3:00pm in SAGE 332 Chapter 16: Electrochemical cells, voltaic cells, find anode/cathode reactions
12	M, Apr 6 W, Apr 8 F, Apr 10	Chapter 16: Determine Cell potentials Chapter 16: Nernst equation Chapter 17: Electrolysis calculations
13	M, Apr 13 W, Apr 15 F, Apr 17	Chapter 17: Chemical Kinetics: Reaction rates, Rate law calculations Chapter 17: Determine rate law, Integrated rate law Chapter 17: Finish integrated calculations, Half-life, collision theory
14	M, Apr 20 W, Apr 22 F, Apr 24	Chapter 17: calculations of Ea and rate constants **Exam 4: Chap 16 & 17 part 1** drop in 9:00am–3:00pm in SAGE 332 Chapter 17 part 2 and Begin Chapter 20: rxn mechanisms, Nuclear stability

15	M, Apr 27 W, Apr 29 F, May 1	Finish Chapter 20 and General Review: Nuclear rxns, fusion and fission Final Exam Review **UNT Reading Day- NO CLASSES**
16	**Sa,** May 2	**Comprehensive Final Exam: drop in 9:00am–3:00pm in SAGE 332**

Saturday, May 2, *(Drop in 9:00am–3:00pm in SAGE 332)* is our scheduled Comprehensive Final Exam time as scheduled by the Office of the Registrar in our regular classroom

****Always confirm date/time with Office of the Registrar****

Strategies for Success

In order to succeed in any college course, students must be self-motivated, dedicated, self-disciplined team-players that are willing to learn not only from the instructor, but also from each other and to keep up with the reading schedule, homework and quizzes' deadlines.

The most important key to success is working consistently on the course material throughout the semester and accessing help promptly whenever it is needed. If you start to fall behind, be sure to get caught up ASAP.

Below are a few important considerations that will help to keep you firmly focused on your academic goals.

How to Make an A in this Class: A loose blueprint

1. **Attend every lecture and recitation**. A very strong correlation exists between attendance and success in Chemistry 1420. Because the topics covered in this course build on each other, missing even one class can mean the difference between an 'A' and a 'B' or even 'C' in the course. Beware!!!
2. Prior to class, read the chapter which will be covered in lecture.
3. Review your lecture notes **immediately** after each class. Correct obvious errors and note topics which require further study or clarification.
4. **Work on the lecture review quizzes and homework daily.**
5. While working out the problems, **make notes for yourself** about how you solved the homework and refer to lecture notes for similar examples or the textbook for similar examples (problems that are worked out are in tan boxes).
6. **Spend the necessary amount of time studying chemistry.** The rule of thumb for succeeding in Chemistry is two to three hours of study for every hour of lecture. This means that at a minimum you should plan to study Chemistry for six hours each week.
7. **Don't procrastinate**. These concepts take time to sink in, and you may have to practice these exercises over a period of many days in order to master the necessary skills.
8. **Form a study group**. This is your first avenue for getting help. Be able to communicate with each other on short notice, not just before class.
9. Play close attention to the supplemental homework problems; these are similar to a practice exam. ***These are worked out during recitation and answers are not posted on Canvas or in the book.***
10. E-mail or ask professor in class if you have any questions, don't wait until you are cramming the night before an exam and feel swamped.
11. To study for exams: **go over notes and all assigned HW problems with a strong focus on the Lecture Review quizzes;** review notes you wrote to yourself about how you solved each problem.
12. Have confidence in your abilities and have a successful semester!

Visit **success.unt.edu** for even more resources and general tips and information.

Groupwork

Groupwork is highly encouraged as it is virtually impossible to do well on any science course without tons of help from your peers. Prioritize forming a study group and consider it your first line of defense

against failure. Meet with them often to work on the course material and teach each other the new concepts that you have learned. Assign each other different concepts for each person in the team to master. Then, have a meeting where everyone articulates the concepts they have mastered for everyone else's benefit. Learn from each other that way.
Remember!!! You are not looking for people to teach you from among your classmates. Rather, you are looking for people that you can teach the concepts that you have mastered! Your study group will consist of people that want to bounce ideas and concepts off of each other.

How much Outside Class Study Time?

- The rule of thumb that research has found to work for most students is the 2 – 3 hours outside of class study time, for every hour of Lecture.
- This means that **you must spend at least 6- 9 hours studying CHEM 1420 and working with your study group every week** in order to succeed in this class. The more you can do the better.

TIPS FOR SUCCESS

We will be using an active and student-centered approach to learning. We will use simulations, teamwork collaboration, and group discussions. Your peers will be the first place you can turn to ask questions or verify your knowledge of the topics we are discussing. I will ask questions during class and will wait for responses. Even wrong answers are okay! It helps me know where you are at in the discussion.

Before Class

You should be doing the following things before attending class: review material from the last class, read from the textbook about the material in the upcoming class, write down any questions you have, review upcoming topics (5-10 minutes), and download/print the lecture slides for the upcoming class.

During Class

While in class, you should: stay awake, follow along with the notes, ask questions, work through problems, and collaborate with your peers. You should NOT simply be re-writing the notes.

After Class

After each class, take time to: review notes, work through homework problems, attend PLTL sessions, and ask questions in the CRC or drop-in student/office hours.

Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors online. Here are some general guidelines:

- Treat your instructor and classmates with respect in email or any other communication.
- Always use your professors' proper title: Dr. or Prof., or if in doubt use Mr. or Ms.
- Unless specifically invited, don't refer to your instructor by first name.
- Use clear and concise language.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you."
- Use standard fonts such as Ariel, Calibri or Times new Roman and use a size 10- or 12-point font

- Avoid using the caps lock feature AS IT CAN BE INTERPRETTED AS YELLING.
- DoN't Do ThIs WeIrD WaY oF tYpInG.
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.
- Be careful with personal information (both yours and other's).
- Do not send confidential information via e-mail

See these Engagement Guidelines (https://clear.unt.edu/online-communication-tips) for more information.

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

ADA Policy

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website at http://www.unt.edu/oda. You may also contact ODA by phone at (940) 565-4323.

Disclaimer

The descriptions and timelines outlined in this document are subject to change at the discretion of the Instructor