CHEM 1410.004 – General Chemistry I for Science Majors

Spring 2024

Instructor Contact

Name: Dr. Sophie Kinyanjui
Office Location: CHEM 164
Office Hours: Office hours: Th: 3:30 PM – 4:30 PM
MoFr: 10:30 AM – 11:30 AM, and by appointment (Please e-mail).
Email: sophia.kinyanjui@unt.edu

Class Times and Rooms

- Lecture: TuTh 11:00 AM – 12:20 PM Room: CHEM 106
- Recitation: Th 2:00 PM – 2:50 PM Room: CHEM 106

Communication Expectations:

Coming to my 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. While I want to be available to you to answer all of your questions via email, I ask that you be patient. My policy is: I respond to EVERY student email. I will try to reply to all emails within 48 hours during the regular working week. Emails received after noon on Fridays or over the weekend may not receive an answer until Monday mornings. (If I do not respond to your email within 48 hours, it can only mean that I DID NOT receive it. Please resend it through Canvas, to make sure that I get it).

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!

Welcome to UNT!

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT’s full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

Course Description

This is the first a two-semester sequence of general chemistry for science majors, intended to introduce you to the foundations of chemistry. The material is presented in what’s referred to as an atoms-first approach, which means that we begin by talking about the parts of the atom, then how they join together to create molecules, then what kind of reactions the molecules can go through. It is a gradual building up of the information that you need to understand the next topic, narrated in as coherent a story as possible. We approach problems in both a qualitative and quantitative manner, so math skills (basic arithmetic, algebra, and calculator skills) are a must!

Course Prerequisites or Other Restrictions

Pre-reqs: C or better in MATH 1100 or equivalent course
Co-Reqs: - CHEM 1410.241 (Recitation). This course is MANDATORY! (REF: UNT catalog)
- While it is not required, it is strongly encouraged to enroll in CHEM 1430 (General Chemistry I lab). If you are not required to take the lab or you otherwise cannot do so this semester, you will be just fine.

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

1. Apply dimensional analysis to solve problems.
2. Demonstrate an understanding of the mole concept and apply moles in calculations relating quantities of substances to each other in reactions.
3. Explain the concept of quantization as it applies to modern atomic theory.
4. Investigate the quantum mechanical model of the atom, write and interpret quantum numbers for the electrons in an atom. Write electronic configurations and predict chemical properties.
5. Differentiate between ionic and molecular compounds, write Lewis formulas, and account for differences in properties.
6. Describe the fundamental particles of matter; relate basic laws and theories to their behavior, utilize a systematic method of naming compounds and polyatomic ions.
7. Utilize the VSEPR theory to predict the shapes of molecules, account for the effect of lone electron pairs and multiple bonds.
8. Describe atomic orbitals using hybridization, and distinguish between sigma and pi bonds.
9. Write and balance chemical equations and perform stoichiometric calculations. Classify the different types of reactions.
10. Employ bonding theories to identify the intermolecular forces present in pure substances and in mixtures.
11. Explain the relationship between heat, work, internal energy, and enthalpy changes to solve problems involving thermochemical concepts.
12. Demonstrate the understanding of the gas laws and apply them to solve problems. Solve problems using the ideal gas law.

**Required Materials**


**ALEKS 360 Online Homework** – You will access the ALEKS homework as well as the e-book through Canvas by clicking on the ALEKS icon. **The cost of the access code (plus the e-book!) when purchased through Canvas is $65.** If you purchase it from the UNT bookstore, Amazon, or the McGraw-Hill website it will cost more. So, you’re better off following my suggestion to purchase the access code through Canvas by clicking on the ALEKS icon. The first time you click on it, it will prompt you to either purchase the access code, or use the 14-day FREE temporary access. Choose whichever one is applicable to you.

**If you prefer a hard copy of the text, you will have the ability to purchase the loose-leaf copy separately from inside ALEKS.** Technically, the **hard copy** of the text is NOT required and it’ll be an added cost to you.
• YOU NEED A SCIENTIFIC CALCULATOR FOR THIS COURSE!

• Technically ANY SCIENTIFIC CALCULATOR will work for this class. So, if you own any graphing calculator you’re good to go. BUT if you don’t have a calculator and you’re looking to acquire a cheap one for this class, this TI-30X-IIS will be sufficient for this class. It costs approximately $10.00 at Walmart, BestBuy or Office depot. It’s actually cheaper on Amazon!

Caution!!!!

• Cell phones, laptops, tablets, smartwatches, or anything else that can connect to the internet are not allowed on Exams. If you are caught using any item that connects to the internet during any mid-term Exam or the Final Exam, your paper will be confiscated and you will receive zero points for that Exam and that Exam will not be eligible for the Drop Exam policy.

My Teaching Philosophy – The importance of Goal setting

I believe that everyone can “do” 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 in this course is presented in several different ways, from readings 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.

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 and in your other courses that you are taking this Fall. Many of my students want to make A’s in all their classes. Some want to make B’s and a few just want to survive and therefore consider a C sufficient for their purposes. I make no judgment about what you have chosen for yourself. My job is to support you in achieving your goal. So, I would like you to be very honest with yourself and write down the grades you want to make in your classes on a plain piece of paper.

Now set your second goal which is to work diligently towards achieving the first goal throughout this semester. In fact, go ahead and write the grades on more pieces of paper and stick them to the fridge, to the bathroom mirror, on your desk, even make the letter grades your 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, just gently turn from it and continue walking towards your goal. Practice this every day without fail.

You see, I believe in you. I believe that you are able to achieve any goal that you set your sights on as long as you keep walking towards it without getting overly distracted. I would like you now to believe in yourself and 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, “Wait till I finish, and I will show you.”
Remember. All you have to do is to keep thinking about your goals every moment, and simply keep walking/working towards them. You do not have to struggle. You just keep working. You just need to keep working on every assignment, keep up with every reading and every homework assignment 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.

A 16-week semester is such a short time. Before you know it, the semester will be over. And..... You will have achieved your goal...... OR not. It all depends on the decisions you make every minute, of every hour, of every day.

As I said before, I believe in You, and I believe in your ability to achieve any goal that you set your mind on and to which you give 100% of your total undivided focus. You can do it.

You better believe it. And believe in yourself.

**ASSESSMENT & GRADING**

Total Points Possible for Semester/Grading Scale = 1000

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>1000-900</td>
<td>A</td>
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<tr>
<td>699-600</td>
<td>D</td>
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<tr>
<td>899-800</td>
<td>B</td>
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<tr>
<td>599-500</td>
<td>F</td>
</tr>
<tr>
<td>799-700</td>
<td>C</td>
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</tbody>
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i. Lecture Attendance  | 20
ii. Recitation Assignments | 150
iii. ALEKS Prerequisite    | 10
iv. ALEKS Objectives      | 70
v. ALEKS Pie              | 100
vi. Lecture participation | 50
vii. Midterm Exams (4 x 100 %) | 400
viii. Final Exam          | 200

Total points | 1000

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**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 helpers. Below is the list of the staff that you may reach out to at any time.

**Other Assistance**

1. Instructor’s Office hours: Th: 3:30 PM – 4:30 PM: MoFr: 10:30 AM – 11:30 AM, and by appointment (Please e-mail).
2. Chemistry Resource Center (CRC): CHEM 231 – on- Thurs. 8am-6pm, Fri 8am-3pm
   –staffed by Chemistry graduate students. For more information visit: [https://chemistry.unt.edu/undergraduate-program/instructional-resources](https://chemistry.unt.edu/undergraduate-program/instructional-resources)
3. 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.
4. Graduate Teaching assistants (TA)
**Preliminary Lecture Schedule (subject to change)**

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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Material</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tu, Jan 16</td>
<td>Introduction. Syllabus. ALEKS. Good study habits. Begin Chapter 1.</td>
<td>Chapter 1.1-13.3</td>
</tr>
<tr>
<td></td>
<td>Th, Jan 18</td>
<td>Chapter 1, <em>Chemistry: The Science of Change</em></td>
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<tr>
<td>2</td>
<td>Tu, Jan 23</td>
<td>Chapter 1</td>
<td>Chapter 1.4 – 1.6</td>
</tr>
<tr>
<td></td>
<td>Th, Jan 25</td>
<td>Chapter 2, <em>Atoms and the Periodic Table</em></td>
<td>Chapter 2.1 – 2.4</td>
</tr>
<tr>
<td>3</td>
<td>Tu, Jan 30</td>
<td>Chapter 2</td>
<td>Chapter 2.5-2.7</td>
</tr>
<tr>
<td></td>
<td>Th, Feb 1</td>
<td>Chapter 3: Quantum Theory and the electronic structure of atoms</td>
<td>Chapter 3.1 -3.3</td>
</tr>
<tr>
<td>4</td>
<td>Tu, Feb 6</td>
<td>Chapter 3; Begin Chapter 4: Periodic Trends of the Elements</td>
<td>Chapter 3.4 – 3.6</td>
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<td></td>
<td>Th, Feb 8</td>
<td></td>
<td>Chapter 3.7-3.8</td>
</tr>
<tr>
<td>5</td>
<td>Tu, Feb 13</td>
<td>Chapter 4: Begin Chapter 5: Ionic and Covalent Compounds</td>
<td>Chapter 4.1-4.4</td>
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<td></td>
<td>Th Feb 15</td>
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<td></td>
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<td><strong>Th: 2:00 – 2:50 PM: Exam 1 on Chapters 1, 2, &amp; 3</strong></td>
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<tr>
<td>6</td>
<td>Tu, Feb 20</td>
<td>Chapter 5</td>
<td>Chapter 4.4-4.7</td>
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<td></td>
<td>Th, Feb 22</td>
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<td>Chapter 5.1-5.6</td>
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<tr>
<td>7</td>
<td>Tu, Feb 27</td>
<td>Chapter 5; Begin Chapter 6: Representing Molecules</td>
<td>Chapter 5.6-5.10</td>
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<td></td>
<td>Th, Feb 29</td>
<td>Chapter 6</td>
<td>Chapter 6.1-6.3</td>
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<tr>
<td>8</td>
<td>Tu, Mar 5</td>
<td>Chapter 6; Representing Molecules</td>
<td>Chapter 6.4-6.6</td>
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<td></td>
<td>Th, Mar 7</td>
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<td><strong>Th: 2:00 – 2:50 PM, Exam 2 on Chapters 4 and 5</strong></td>
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<td>Mar 11 - 17 <strong>SPRING BREAK – NO CLASSES</strong></td>
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<tr>
<td>9</td>
<td>Tu, Mar 19</td>
<td>Chapter 7;</td>
<td>Chapter 7.1-7.3</td>
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<tr>
<td></td>
<td>Th, Mar 21</td>
<td>Chapter 7 <em>Molecular Geometry, Intermolecular forces</em></td>
<td>Chapter 7.4-7.6</td>
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<tr>
<td>10</td>
<td>Tu, Mar 26</td>
<td>Chapter 7;</td>
<td>Chapter 8.1 – 8.3</td>
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<td></td>
<td>Th, Mar 28</td>
<td>Chapter 8: <em>Chemical Reactions</em></td>
<td>Chapter 8.4 – 8.5</td>
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<tr>
<td>11</td>
<td>Tu, Apr 2</td>
<td>Chapter 8</td>
<td>Chapter 9.1-9.2</td>
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<td></td>
<td>Th, Apr 4</td>
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<td>Chapter 9.3-9.4</td>
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<tr>
<td>12</td>
<td>Tu, Apr 9</td>
<td>Chapter 9; Begin Chapter 9: Aq. Chemical reactions</td>
<td>Chapter 9.5-9.6</td>
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<td>Th, Apr 11</td>
<td>Chapter 9</td>
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<td><strong>Th: 2:00 – 2:50 PM, Exam 3 on Chapters 6, 7 and 8</strong></td>
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<tr>
<td>13</td>
<td>Tu, Apr 16</td>
<td>Chapter 10 <em>Energy Changes in Chemical Reactions</em></td>
<td>Chapter 10.1-10.3</td>
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<td></td>
<td>Th, Apr 18</td>
<td>Chapter 10</td>
<td>Chapter 10.4-10.5</td>
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<tr>
<td>14</td>
<td>Tu, Apr 23</td>
<td>Chapter 10, Begin Chapter 11</td>
<td>Chapter 11.1-11.3</td>
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<td></td>
<td>Th, Apr 25</td>
<td>Chapter 11: Gases</td>
<td>Chapter 11.4-11.5</td>
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<tr>
<td>15</td>
<td>Tu, Apr 30</td>
<td>Chapter 10, Begin Chapter 11</td>
<td>Open Pie</td>
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<td>Th, May 2</td>
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<td>Fr, May 3</td>
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<td><strong>Tu: 11:00 – 11:50 AM, Exam 4 on Chapters 9, 10 and 11</strong></td>
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<td></td>
<td>Finish chapter 11; Chapter Reviews and Work on Open Pie</td>
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<td>UNT Reading Day</td>
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<tr>
<td>16</td>
<td>Tu, May 7</td>
<td>Final ACS Exam [Comprehensive] 10:30 am – 12:30 pm</td>
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<td>Room C HEM 106</td>
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**Tuesday, May 7, 10:30 am – 12:30 pm 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**
<table>
<thead>
<tr>
<th>Week</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wed</th>
<th>Thurs</th>
<th>Friday</th>
<th>Saturday</th>
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<tbody>
<tr>
<td>Week 1</td>
<td></td>
<td>School Starts</td>
<td></td>
<td></td>
<td></td>
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<td>Pre-requisite Objective</td>
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<tr>
<td>Week 2</td>
<td>Objective due #1A</td>
<td></td>
<td>Objective due #1B</td>
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<td>Week 3</td>
<td>Objective due #2A</td>
<td></td>
<td>Objective due #2B</td>
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<td>Week 4</td>
<td>Objective due #3A</td>
<td></td>
<td>Objective due #3B</td>
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<tr>
<td>Week 5</td>
<td>Open pie</td>
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<td>Objective due #4 w/POKC</td>
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<td>Exam 1</td>
<td>T, Feb 13</td>
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<tr>
<td>Week 6</td>
<td>Objective due #5A</td>
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<td>Objective due #5B</td>
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<td>Week 7</td>
<td>Objective due #6A</td>
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<td>Objective due #6B</td>
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<td>Week 8</td>
<td>Open pie</td>
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<td>Objective due #7A</td>
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<td>Exam 2</td>
<td>T, Mar 7</td>
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<tr>
<td>Week 9</td>
<td>Objective due #7B</td>
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<td>Objective due #8A w/POKC</td>
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<td>Week 10</td>
<td>Objective due #8B</td>
<td></td>
<td>Objective due #9A</td>
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<td>Week 11</td>
<td>Objective due #9C</td>
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<td>Objective due #9B</td>
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<td>Week 12</td>
<td>Open Pie</td>
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<td>Objective due #10A</td>
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<td>Exam 3</td>
<td>T, Apr 9</td>
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<td>Week 13</td>
<td>Objective due #10B</td>
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<td>Objective due #11A w/POKC</td>
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<td>Week 14</td>
<td>Objective due #11B</td>
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<td>Week 15</td>
<td>Open Pie</td>
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<td>Open Pie</td>
<td>Open Pie</td>
<td>Exam 4</td>
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<td>Open Pie</td>
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<tr>
<td>Week 16</td>
<td>Open Pie</td>
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<td></td>
<td>Final Exam</td>
<td></td>
<td>Tu, May 7</td>
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</tbody>
</table>

**Legend:**

- **POKC** = Post Objective Knowledge Check: asks students approximately 20-30 questions to determine their precise knowledge state in their ALEKS course. A Knowledge Check will determine, for each topic in the course, which topics each student knows, which topics each student doesn’t know, and which topics each student is ready to learn.

- **Open Pie** = Times when you get an extension to work on and fill in the gaps in your pie. In the Open pie mode, you are able to work on any topic. Thus, this is a good tool for review of topics before a test.
Examination Policy

All exams must be taken, on the scheduled day and at the scheduled time. Please add the exams dates to your calendars.

Late Work

Late work, homework, quizzes, and exams will not be accepted beyond the deadlines. 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 an exam then, you must email me ASAP. I get to decide the validity of your reasons. A missed exam (with an 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. 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. 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 after the fact.

Class Attendance

Attendance will be taken and there will be group activities that will be turned in for a grade during each 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.

Drop Exams: Your lowest mid-term Exam grade will be replaced by half of your Final Exam grade, if half of your Final Exam grade is to your advantage. If you had to miss a mid-term exam due to COVID or any other excused absence, this exam will be replaced by half of the Final exam.

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

** In order to succeed in this any college course, students must be self-motivated, dedicated, self-disciplined team-players that are willing to learn, 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. Here are a few important considerations that will keep you firmly focused on your academic goals:

1. Lecture Attendance
   - lecture is the most important source of exam information
   - lecture material will come from several sources, including the textbook
   - be punctual, I make announcements at the beginning of lecture and students are responsible for ALL
announcements made in class. I take attendance at some point in every class.

–lecture PowerPoint slides have been posted to Canvas. These strictly serve as a guide, NOT a comprehensive resource for the class. They can be used for quick reference as you prepare for exams. Students may print these and bring them to class for note-taking. Students are expected to take comprehensive notes for themselves during lecture.

–attendance to every lecture is expected, and attendance quizzes will be given during every lecture. Groupwork is emphasized as a perfect study strategy. Nothing compares to the ability to bounce ideas off of your peers as well as the ability to explain chemistry to them and answer their questions. Explaining a concept/s to someone else is the best way to learn and retain the knowledge.

2. **Recitation Assignments**

–During Recitation, students will work on a set of problems in groups. However, each student is responsible for ensuring that they understand how to solve each problem, by asking questions, and actively participating in the exercise. These same questions or similar show up later in exams!

–during recitation, the class TA and PLTLs will be helping you with the assignment. The first 30 minutes of recitation will be spent working on the problems in your groups with the help of the TA and the PLTLs.

The last 10 minutes are for the recitation quizzes. The recitation quizzes will be posted to Canvas, and they will made available during the last 10 minutes of the recitation class.

–5 of the 15 points of the recitation grade comes from participation in the group work in the first 30 minutes. Another 5 points will come from answering the groupwork questions correctly and showing all the work (!!) while the last 5 points will be from answering the recitation quiz questions correctly. During the group work, you will solve problems very similar to the ones on the quiz. So, pay attention, and ask questions!

–Thus, NOTE that recitation quizzes will be graded for both completeness and correctness. It is NOT a completion grade!

–You MUST HAVE your scientific calculator ready for recitation

–the lowest recitation grade will be ignored in the calculation of your final grade

–there are NO make-ups for recitation (since its group-work!). If you miss one recitation, it becomes your drop grade. If you miss more, you are in trouble.

–some exam material may come directly from work in recitation

3. **ALEKS Adaptive Homework**

Your online homework utilizes the ALEKS 360 software from McGraw-Hill.

(i) **What is ALEKS?**

ALEKS is a Web-based, Artificially Intelligent Assessment and Learning System. ALEKS uses adaptive questioning to quickly, and accurately, determine exactly what a student knows and does not know in a course. ALEKS then instructs the student on the topics he/she is most ready to learn. As a student works through a course, ALEKS periodically reassesses the student to ensure that topics learned are also retained. ALEKS courses are very complete in their topic coverage and ALEKS avoids multiple-choice questions. A student who shows a high level of mastery of an ALEKS course will be successful in the actual course he/she is taking.

Thus, ALEKS uses artificial intelligence (AI) to map the details of each student's knowledge. ALEKS "knows," at each moment, with respect to each individual topic, whether each individual student has mastered that topic. If not, ALEKS knows whether the student is ready to learn the topic at that moment. ALEKS uses this knowledge
to make learning more efficient and effective by continuously offering the student a selection of only the topics he/she is ready to learn right now. This builds student confidence and learning momentum.

In this way, ALEKS also provides the advantages of one-on-one very personalized instruction, 24/7, from virtually any Web-based computer for a fraction of the cost of a human tutor.

(ii) **ALEKS Grading**

The ALEKS homework grade will constitute 18% of your total Final Grade (= 180 points). Now since ALEKS has to do with mastery of concepts rather than right and wrong answers to specific questions, the grading model is different from that of regular online homework. Your ALEKS grade will be determined as follows:

- **10 points** = ALEKS prerequisite review completed by the first Saturday of the semester (Aug 26th, 2023).
- **70 points = objectives due dates** (I’ll count whatever % you will have completed by objective due date)
- **100 points = ALEKS pie completion** (I’ll count whatever % you will have completed by the end of the semester)

**In case your ALEKS pie is not complete at the end of the semester, there will be a grace period of approximately a week, where we will enter the Open-Pie mode. You will them be able to go in and work on any topic of your choice and fill in the gaps in your pie and re-gain the points you had lost. You can also think of this as your Review for the Final Comprehensive Exam.**

4. **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 and working on ALEKS as well as the Chapter Reviews every week in order to succeed in this class. The more you can do the better.
- In general, if you already know the material through lecture attendance, reading the text, etc., you will find that you spend much less time on ALEKS, and that you are able to retain concepts with much more ease. In this way, ALEKS “rewards” those who are working hard.
- Form a study group or use your recitation group and schedule study time with them where you teach each other the concepts you have mastered. You will find that you learn best by teaching another. If you can articulate a concept so well that someone else understands, it means that you have mastered it. So, help yourself learn and retain the information by teaching others!

**CAUTION!!!**

Please do not spend hours trying to figure out a single ALEKS problem that is difficult for you to unravel. If you try the first time and you can’t get it right, try the second time, maybe even a third time. If you still can’t figure it out, take a screen shot of it, explain how you are trying to solve it, and email it to me (Dr. Kinyanjui), or ask your PLTL or TA during a session, or ask the TAs at the Chemistry Resource Center (CRC – CHEM building Room 231), or ask someone in your study group…… In short, please do not spend hours trying to figure out a single ALEKS problem by yourself. You have so many ways of getting help. Please get the help you need in order to avoid that feeling of overwhelm or frustration.
5. **Mid-term Exams**
- There will be FOUR midterm exams.
- Focus: concepts covered in class, ALEKS objectives, and recitations Quizzes.
- ALL 4 MID-TERMS MUST BE TAKEN, at the scheduled day and time
- Lowest of the 4 exam scores will be automatically replaced by a higher final exam score
- If you have an acceptable, documented reason for missing an exam (examples include: documented illness, auto accident, participation in UNT-sponsored event, observance of religious holiday), you will be allowed to replace the missed exam with your score on the final exam. Under extremely extraneous circumstances, you may qualify for a make-up test. Therefore, it will be very beneficial to talk to me about a missed test, ASAP.
- Otherwise, you will receive a “zero” for that exam, and that zero may not be replaced by the final, and will be included in the calculation of your final class grade. Each mid-term exam counts for 10% of your overall grade
  (NOTE: Since the observance of a religious holiday is not an emergency but something you know about in advance, you must let me know about it ahead of time. It will not count as an excused absence if you tell me about it after missing an exam. The same case applies to scheduled UNT events and other appointments that you know about ahead of time).

6. **Final ACS Exam**
- Comprehensive ACS (American Chemical Society) standardized exam that covers all the material covered in the course. It is one hour and 50 minutes in length and MUST be taken on the scheduled day and time. It **cannot be replaced by any other grade**. It accounts for 20% of your overall grade
- No make-up final will be given. **NOTE THE DAY AND TIME**

**WITHDRAWAL INFORMATION**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 29</td>
<td>Census - Official Enrollment Determined</td>
</tr>
<tr>
<td></td>
<td>Last day to drop a course section to no longer appear on the official transcript and to receive a full refund for the course section. <em>(Dropping courses may impact financial aid and degree completion. See advisors.)</em></td>
</tr>
<tr>
<td>Jan 30</td>
<td>Drop with a Grade of W Begins</td>
</tr>
<tr>
<td></td>
<td>Beginning this date students can drop a course with a grade of W. The course appears on the transcript with a grade of W and tuitions fees remain. <em>(Dropping courses may impact financial aid and degree completion. See advisors.)</em></td>
</tr>
<tr>
<td>Feb 23</td>
<td>Last day to change to pass/no pass grade option</td>
</tr>
<tr>
<td>Apr 5</td>
<td>Last day for a student to drop a course or all courses with a grade of W</td>
</tr>
<tr>
<td>Apr 6</td>
<td>First day to request a grade of Incomplete</td>
</tr>
</tbody>
</table>

*Detailed Academic Calendar can be found at:*
[https://registrar.unt.edu/registration/spring-registration-guide](https://registrar.unt.edu/registration/spring-registration-guide)
COURSE POLICIES

Assignment Policy

All online homework assignments will be completed on Canvas via the link to ALEKS. To access the homework, students must login to CANVAS and click on the ALEKS link as shown below:

Due dates are on the syllabus schedule and also available when you log on to ALEKS. Sometimes the due dates on Canvas are different from the ones on ALEKS (for some weird reasons!). Whenever this happens, **ALWAYS trust the due dates on ALEKS, NOT Canvas!**

TECHNICAL REQUIREMENTS/ASSISTANCE

The University is committed to providing a reliable internet service to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

**Always contact Tech Support FIRST** whenever you encounter technical difficulties with ALEKS. Below is the link to the ALEKS tech support.
https://mhedu.force.com/aleks/s/alekscontactsupport

Minimum Technology Requirements

At a minimum, you will need to have the following:

- Computer
- A scientific calculator (**Your cell phone is NOT a calculator**! The **TI-30X IIS** scientific calculator is ideal for this course. However, any scientific calculator that has NO internet access will work.)
- Reliable internet access
- Speakers
- Microphone
• Plug-ins
• Microsoft Office Suite
• Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)

Student Registration Instructions for Canvas and ALEKS

First, enter your Canvas course
1. Sign in to Canvas (https://unt.instructure.com/) and enter your Canvas course.
2. Go to Modules and open Module Zero – ALEKS resources:
   • Watch the first video on Introduction to ALEKS.
   • This is a good time to watch the other related videos so that you familiarize yourself with these resources, and what is expected of you as far as the ALEKS assignments are concerned.

Next, get access to your ALEKS content
1. Open your ALEKS by clicking on the icon on the top left hand-side menu on Canvas.
   • Follow the instructions from the Intro video to purchase the access code for ALEKS. You may choose to accept the 2-week temporary free access, if you don’t have the money at that time.
2. Get started on the Initial Knowledge Check (Prerequisite Review) asap.

Note: Remember: You will always access ALEKS assignments through Canvas.

Get your computer ready
For the best experience, check the system requirements for your product at https://mhedu.force.com/DTS/s/article/McGraw-Hill-System-Requirements

Need help?
For help with McGraw-Hill ALEKS, go to https://www.mheducation.com/highered/contact.html

McGraw-Hill ALEKS Accessibility Information:
https://www.mheducation.com/about/accessibility.html

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: UIT Student Help Desk site (http://www.unt.edu/helpdesk/index.htm)
Email: helpdesk@unt.edu
Phone: 940.565-2324
In Person: Sage Hall, Room 130
Hours are:
• Monday-Thursday 8am-midnight
• Friday 8am-8pm
• Saturday 9am-5p  
• Sunday 8am-midnight  
• **Laptop Checkout:** 8am-7pm  
• Hardware and software necessary to use CANVAS: [http://www.unt.edu/helpdesk/canvas/](http://www.unt.edu/helpdesk/canvas/)  
• Browser requirements: [https://clear.unt.edu/supported-technologies/canvas/requirements](https://clear.unt.edu/supported-technologies/canvas/requirements)  
• Other related hardware or software necessary for the course: such as headset/microphone for synchronous chats, word processor, etc.

**Student Academic Support Services**

• [Academic Resources](http://www.unt.edu/helpdesk/canvas/): where to buy textbooks and supplies, access academic catalogs and programs, register for classes, and more  
• [Code of Student Conduct](http://www.unt.edu/helpdesk/canvas/): provides Code of Student Conduct along with other useful links  
• [Office of Disability Accommodation](http://www.unt.edu/helpdesk/canvas/): exists to prevent discrimination based on disability and to help students reach a higher level of independence  
• [Counseling and Testing Services](http://www.unt.edu/helpdesk/canvas/): provides counseling services to the UNT community, as well as testing services; such as admissions testing, computer-based testing, career testing, and other tests  
• [UNT Libraries](http://www.unt.edu/helpdesk/canvas/): library services  
• [UNT Learning Center](http://www.unt.edu/helpdesk/canvas/): provides a variety of services, including tutoring, to enhance the student academic experience  
• [UNT Writing Center](http://www.unt.edu/helpdesk/canvas/): offers free writing tutoring to all UNT students, undergraduate and graduate  
• [Succeed at UNT](http://www.unt.edu/helpdesk/canvas/): information regarding how to be a successful student at UNT

**Rules of Engagement**

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

• While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law will not be tolerated.  
• Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.  
• Ask for and use the correct name and pronouns for your instructor and classmates.  
• Speak from personal experiences. Use “I” statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual’s experiences.  
• Use your critical thinking skills to challenge other people’s ideas, instead of attacking individuals.  
• Avoid using all caps while communicating digitally. This may be interpreted as “YELLING!”  
• Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.  
• Avoid using “text-talk” unless explicitly permitted by your instructor.  
• Proofread and fact-check your sources.  
• Keep in mind that online posts can be permanent, so think first before you type.
See these Engagement Guidelines (https://clear.unt.edu/online-communication-tips) for more information.

**Student Evaluation Administration Dates**

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website at http://spot.unt.edu/ or email spot@unt.edu.

**UNT POLICIES**

**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” 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 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 designed to give a student an unfair advantage;

**ADA Policy**

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of 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 accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

**Incomplete Grade**

An incomplete grade is only given if the student meets the requirements as set forth by the university. The incomplete 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. All work in 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

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student’s records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University’s policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at deanofstudents.unt.edu/conduct.

Access to Information - Eagle Connect

Students’ access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student’s Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail: eagleconnect.unt.edu/
Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment, sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT’s Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim’s compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565-2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Academic Support & Student Services

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- Individual Counseling (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- UNT Records
- UNT ID Card
- UNT Email Address
- Legal Name

*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don’t assume someone’s name, we should also ask and not assume someone’s pronouns.
You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person’s pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services

- Registrar (https://registrar.unt.edu/registration)
- Financial Aid (https://financialaid.unt.edu/)
- Student Legal Services (https://studentaffairs.unt.edu/student-legal-services)
- Career Center (https://studentaffairs.unt.edu/career-center)
- Multicultural Center (https://edo.unt.edu/multicultural-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- Pride Alliance (https://edo.unt.edu/pridealliance)
- UNT Food Pantry (https://deanofstudents.unt.edu/resources/food-pantry)

Academic Support Services

- Academic Resource Center (https://clear.unt.edu/canvas/student-resources)
- Academic Success Center (https://success.unt.edu/asc)
- UNT Libraries (https://library.unt.edu/)
- Writing Lab (http://writingcenter.unt.edu/)

Disclaimer

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