



Syllabus: **General Chemistry 2**

Course Number: **CHEM 1312**

Instructor Information

Name: **M. Sheets**

Office: **Chemistry 201**

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Office Hours: **see posted hours**

### **Textbook/Materials Information**

*Chemistry*, OpenStax College ISBN-10 # 1938168399 ISBN-13 # 978-1-938168-39-0

Openstax Textbook: <https://openstaxcollege.org/textbooks/chemistry>

and available for purchase at [http://www.amazon.com/Chemistry-](http://www.amazon.com/Chemistry-OpenStax/dp/1938168399/ref=sr_1_1?s=books&ie=UTF8&qid=1450726977&sr=1-1&keywords=openstax+chemistry)

[OpenStax/dp/1938168399/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1450726977&sr=1-1&keywords=openstax+chemistry](http://www.amazon.com/Chemistry-OpenStax/dp/1938168399/ref=sr_1_1?s=books&ie=UTF8&qid=1450726977&sr=1-1&keywords=openstax+chemistry)

Scientific calculator (TI-30XA is sufficient or such – refer to discussion)

**Approved** Chemical Splash Goggles (for lab)

### **Student Learning Outcomes for the Course**

**Learning Outcomes:** The learning outcomes for Chemistry 1312 are published by the Texas Higher Education Coordinating Board and are available from the Lower-Division Academic Course Guide Manual. The following are included for those that successfully complete the course:

1. State the characteristics of liquids and solids, including phase diagrams and spectrometry.
2. Articulate the importance of intermolecular interactions and predict trends in physical properties.
3. Identify the characteristics of acids, bases, and salts, and solve problems based on their quantitative relationships.
4. Identify and balance oxidation-reduction equations, and solve redox titration problems.
5. Determine the rate of a reaction and its dependence on concentration, time, and temperature.
6. Apply the principles of equilibrium to aqueous systems using LeChatelier's Principle to predict the effects of concentration, pressure, and temperature changes on equilibrium mixtures.
7. Analyze and perform calculations with the thermodynamic functions, enthalpy, entropy, and free energy.
8. Discuss the construction and operation of galvanic and electrolytic electrochemical cells, and determine standard and non-standard cell potentials.
9. Define nuclear decay processes.
10. Describe basic principles of organic chemistry and descriptive inorganic chemistry

### **Student Requirements for Completion of the Course**

You will be given approximately nine major tests, plus a **comprehensive final** at the end of the semester. Each of the tests will be worth 100 points, with the final worth 100 points. Your lowest percentage major test grade, excluding the final, will be dropped. You will also be given short quizzes over the periodic table worth 30 points each. At the end of the semester, grades will be assigned according to the number of points you have gained in relation to the number of points possible. Tests will cover the following: Test 1 – Chapter 9; Test 2 - chapter 10; Test 3 -

chapter 11; Test 4 - chapter 12; Test 5 - chapter 13; Test 6 – chapter 14& 15; Test 7 – chapter 16; Test 8 - chapter 17; Test 9 – chapters 21 & 20.

## Student Assessment

You have the following possibilities for earning points:

(1) 6 Element quizzes @ 30 pts	180 points
(2) 9 Major tests @ 100 pts	900 points
(3) Homework	100 points
(4) Final exam @ 100 points	<u>100 points</u>
	1380 points
(5) Lowest major test grade dropped	<u>-100 points</u>
	<b>1280 points possible</b>

## Grading Scale

Grade	%
A	90-100
B	80-89
C	70-79
D	60-69
F	59-below

## Class Schedule

Class will meet T-Th from 9:30-10:50 for lecture. Any work on bonus lessons will be on your time. If you are signed up for lab, it will meet on Thursday from 12:30-3:20.

## Absentee Policy

Texarkana College's absentee policy allows instructors to withdraw a student from a course due to excessive absences. If a student leaves and returns during class or leaves the class before the class is over, he/she **may** be considered absent. Three tardies constitute one absence. It is the student's responsibility to check the syllabus for each instructor's tardy policy.

In some workforce/vocational areas, such as nursing and cosmetology, certification requirements necessitate an absentee policy that is more stringent than the institutional policy. In these instances, the matter of certification takes precedence over local policies, since certification policies are established by the State of Texas.

Faculty members **are not** obligated to provide opportunities for students to make-up missed assignments and tests as a result of a student's absence from class. The institution is not required to take attendance with the exception of workforce/vocational areas, where certification requirements require taking attendance. However, experience demonstrates that regular attendance enhances academic success. As such, students are expected to attend each meeting of their registered courses.

A student should not stop attending a class without formally withdrawing from the course by the institutions published Last Day for Students to Drop. If a student stops attending class after the published Last Day for Students to Drop, the student **may** receive a grade of "F" in the class. The instructor will submit the last date of attendance for students receiving a grade of "F" or "W".

Withdrawal from a course(s) **may** affect a student's current or future financial aid eligibility. Students should consult the Financial Aid Office to learn both short and long term consequences of a withdrawal.

### Excused Absences

A student's absence due to school trips and/or school business will not be counted against a student's allowable number of absences. Military duty and absences for Holy Days (FBD LEGAL) are covered in a separate section of the catalog and the student handbook. These are the only excused absences that are considered by Texarkana College. Responsibility for work missed for any absence is placed on the student. Instructors are required to allow students to make up work missed if the absence is due to military duty\* or religious holy days when students follow the correct notification procedures. Instructors are not required to allow students to make up work for absences due to other reasons. Make-up policies are listed in each individual instructor's syllabus.

### Maximum Allowable Absences

After official registration, the following number of unexcused absences will be the maximum allowable before a student **may** be dropped from the class. Mandated program certification requirements detailed for certain programs regarding the maximum allowable unexcused absences takes precedence over the following information.

A COURSE THAT MEETS FOR THE FULL 16 WEEK SEMESTER	
Class or Lab Meets:	An instructor may withdraw a student from a course if absences exceed:
Once a week (Night / Friday classes)	2
Twice a week (MW or TTh classes)	4
Three times a week (MWF or TThF classes)	6
Four times a week (MTWR classes)	8
	Three tardies count as one absence

### CHEM 1312 Attendance Policy

Students are expected to attend and participate in class. While it is recognized that there are many valid reasons for missing class, it must be remembered that if you miss class, you will miss discussion or lab work important to you. Excessive absences **may** lead to your being dropped from class. **You are allowed four (4) absences from lecture.**

### CHEM 1312 Make-up Policy

If you miss a major exam, you will be allowed one (1) make up test. You will need to make up that exam ASAP. Any other missed exams will be treated as a "0" grade. Remember that one grade will be dropped. The 30-point quizzes may be made up until two weeks before finals. **No quizzes will be made up the week before finals or final week**

### Academic Integrity Statement

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated

by the Dean of Students. Proven violations of this nature will result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at <https://texarkanacollege.edu/PDFFiles/CurrentStudents/studenthandbook.pdf>.

### Disability Act Statement:

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations.

### Financial Aid:

**Attention!** Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.



General Chemistry 2 is designed as a second semester class to continue a beginning course in general chemistry. Chemistry 1312 covers chemical equilibrium, phase diagrams and spectrometry, acid-base concepts, thermodynamics, kinetics, electrochemistry, nuclear chemistry, an introduction to organic chemistry and descriptive inorganic chemistry. Topics in laboratory (should you be taking the lab) have been chosen to amplify concepts presented in lecture.

There is a great deal of material to be learned and not much time in which to learn it. To be successful, you must devote sufficient time to the class. This may mean several hours per day outside of class. Exactly how much time will depend on the individual and his/her circumstances.

Please observe the college rules concerning food, drinks, and smoking. ***NO food or drinks will be allowed in the laboratory.*** Please observe the college rules concerning food, drinks, and smoking. The use of tobacco products, including smokeless tobacco and electronic cigarettes, is prohibited on campus. NO food or drinks will be allowed in the laboratory.

**Cellular phones are not to be seen or heard in class.** If your phone (or pager) rings, you **may** be asked to leave class. If you need to be contacted during class for an emergency, the number for the **TC campus police is 903-798-3330**. In an emergency, someone can call this number and the campus police will come and get you out of class. In case of an emergency at TC, I am required to have my cell phone in class so we will be notified in case a RAVE alert is issued.

Please be aware of the guidelines for conduct as stated in the college catalog and student handbook. Students must conduct themselves so other students are not distracted from the pursuit of learning. Discourteous or unseemly behavior will not be tolerated. Faculty members, staff and other students

are to be treated with courtesy and respect. If unacceptable behavior occurs, the student may be asked to leave the classroom and may be subject to disciplinary action up to and including being dropped from the class with a grade of "F".

If you do not have a scientific calculator, I recommend a Texas Instruments TI-30 XA or such at MINIMUM. A graphing calculator is good **IF** you can use it. A very useful intermediate model is the **TI-36 PRO**.

**If you email me, please put CHEM 1312 in the subject line.**

To be successful in this class you must take responsibility for your own learning. Some fortunate few may be able to absorb and process all needed information and skills on first hearing or reading. The rest of us usually have to devote varying amounts of time to studying. "Studying" does not mean just "read the material." It also includes:

- correlating your notes (which you *surely* have taken) with the text material
- working problems with a view of not simply getting the "right answer," but of understanding the process of problem solving
- developing and understanding the material to the point where you are able apply concepts in unfamiliar situations

There are several ways in which you can help yourself in this class. First of all, **preview the material** before class - read ahead. If you have an idea of what we are going to discuss in class, it will make more sense than to have it dumped on you cold.

Second, **if you need help, get it as soon as possible**. Do not wait until you are hopelessly behind. Of course you can come by and see me for help, but you also have other options. One of these is a **study group**. Find three or four people to study with (not eat pizza, talk about sports or soap operas, or even gripe about classes - study). This has several benefits. If you missed a concept or step in class, it is likely that one of your group "got it" and can pass it onto you. Also, one of the best ways to ensure that you really understand an idea is to try to explain it to another student. The old excuse, "I know, but I just can't tell you," usually translates into "I don't know it that well."

Another help you have available is the **tutoring program** that Texarkana College provides. The tutors work out of Student Support Services located in the library. Sometimes tutors are stationed in this building. Do not wait until you are in deep trouble before you see the tutors. These students are paid by the college and their services cost you nothing.

You might also want to inquire at **Student Support Services** about workshops or seminars dealing with study skills, test anxiety, etc. They can be a help and will not cost you anything.