



CHEM 1312 General and Quantitative Chemistry II

COURSE SYLLABUS: Summer II 2022

INSTRUCTOR INFORMATION

Instructor: Mrs. Qianying Zhang (Joy)

Office Location: Science 336

Office Hours: Virtual office at D2L every Thursday morning between 9:00 am and 10:00 am or by appointment (The students are strongly encouraged to use this weekly online office hours to ask questions.)

Office Phone: 903-468-8140

University Email Address: Qianying.Zhang@tamuc.edu (preferred form of communication). The students are expected to put the class ID and name at the beginning of the subject line of all emails, for example, Chem 1312.01 section when you send the emails to the instructor so the instructor can easily identify your email. The instructor will try to respond the student's email within 48 hours not including the weekend.

Students are strongly encouraged to set up text and email notifications in the settings in Brightspace so you will receive emails and texts about important announcements, due dates of assignments, quizzes, and exams.

Class sections: 01W

COURSE INFORMATION

Lectures (Web Based Class): Meets 7/11/2022 through 8/11/2022

Textbook: *General Chemistry*, 11th Edition, Ebbing, Gammon, Brooks/Cole Cengage learning, ISBN: 978-1-305-58034-3. The 9th or 10th edition of the lecture textbook is also fine for you to use.

COURSE DESCRIPTION

General and Quantitative Chemistry II. This course is part of the University Studies core courses and will meet criteria for laboratory science credits.

This is the second part of a two-course sequence of general chemistry. The course is designed primarily for the students majoring in sciences or in pre-professional programs. By the end of the course you will be familiar with a range of fundamental

chemistry topics including chemical reaction rates, chemical equilibrium, acid-base chemistry, solubility, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry, inorganic chemistry and biochemistry. Chemists deal with these subject areas every day, but these concepts are also crucially important to other branches of science and technology.

Prerequisite: The student must have completed Math 1314 or be concurrently enrolled in math 142 or other higher level courses in mathematics. Students who had adequate high school preparation in mathematics or were exempted from Math 1341 will be allowed to enroll with the instructor's consent. Concurrent enrollment of Math 1341 with CHEM 1312 generally is not encouraged. Students who are currently enrolled in math remediation courses such as PJCM 300, PJCM 306, or Math 131 will not be eligible for enrollment in CHEM 1312.

Student Learning Outcomes

1. Students will be able to analyze, evaluate, or solve problems when given a set of circumstances or data. Such as use Le Chatelier's Principle to predict the effects of concentration, pressure and temperature changes on equilibrium mixtures.
2. Student communication will be clear, purposeful, and make appropriate use of evidence, data and technology as applicable. Such as show the detail procedure how to solve the equilibrium problems.
3. Students will be able understand and utilize mathematical functions and empirical principles and processes. Such as use the Henderson-Hasselbalch equation to find the PH for the buffer solution.
4. Students will be able to work together toward a shared purpose relevant to the course or discipline with a sense of shared responsibility for meeting that purpose.

COURSE REQUIREMENTS

Student Responsibilities or Tips for Success in the Course

Student Responsibilities or Tips for Success in the Course: This is an online class therefore attendance is flexible! You are required to access D2L while you participate various activities. Your regular participation activities, login times, visit time spent will be checked regularly. You are strongly encouraged to log into the course several times a unit. Excessive "absence" in online activities may result in loss of points (including in your overall performance points).

Pointers to Succeed in CHEM 1312:

1. The lectures in this course will cover topics from Chapters 12 through 20, and 23 of the assigned textbook. This material will be covered at the rate indicated by the *Tentative Class Schedule*. *Be sure to read the textbook before the lectures*. The lectures will focus on important chemistry concepts but will not serve as a substitute for reading the textbook. The textbook is a more detailed presentation with a more

extensive set of example problems. Chemistry is a physical science and it is imperative to master calculations to pass the course.

2. *Use your homework to practice the concepts you learned in lecture.* Even though the homework is not turned in or graded, working the problems will help you succeed in the course. The more problems that you work the better prepared you will be for exams.

3. *Review the lecture notes after each chapter.* Write down the questions you have and ask the instructor by email or make an appointment with her.

GRADING

Final grades in this course will be based on the following scale:

A = 86%-100%

B = 73%-85%

C = 60%-72%

D = 45%-59%

F = 45% or Below

The grade for this course will be derived as follows:

Homework and Quiz:	10%
Four examinations	80 %
Final Exam	10 %

Late work will not be accepted, and makeup quizzes or exams will not be given.

Students are strongly encouraged to set up text and email notifications in the settings in Brightspace so you will receive emails and texts about important announcements, due dates of assignments, quizzes, and exams. Also make sure to check the email from the instructor.

If you miss an examination or quiz, you will be assigned a zero for that assignment. Your performance and final grade in the lecture will be evaluated on the basis of total points earned. The distribution of points will be based on the following: Quiz (10 points), which will be assigned and discussion throughout the semester. Four partial exams and one comprehensive final exam/group project will carry 80 points and 10 points, for a total of 90 points. The final exam will be comprehensive and cover material from Chapters 12-20, and 23.

The last drop date for the course please sees the website:

<http://www.tamuc.edu/Admissions/registrar/academiccalendars/>

Incomplete grades may be given only if the student has a current average $\geq 70\%$ and is precluded from completion of the course by a documented illness or family crisis.

Communication: If the instructor needs to contact an individual student, it will be via the student's e-mail account. Students should check e-mail frequently. Email is the best, easiest and fastest way to communicate with me.

COURSE OUTLINE / CALENDAR

Tentative Lecture Calendar

Week	Date	Chapter	Topics
1	7/11	Chapter 12	Solutions
	7/12	Chapters 12/13	Solutions/ Rates of Reaction
	7/13	Chapters 13	Rates of Reaction
	7/14	Chapter 14	Chemical Equilibrium
2	7/18	Chapter 14	Chemical Equilibrium
	7/19		Exam 1 (Chapter 12-14)
	7/20	Chapter 15	Acids and Bases
	7/21	Chapter 16	Acid-Base Equilibria
3	7/25	Chapter 16	Acid-Base Equilibria
	7/26	Chapter 17	Solubility and Complex-Ion Equilibria
	7/27	Chapter 17/18	Solubility and Complex-Ion Equilibria/ Thermodynamics and Equilibrium
	7/28		Exam 2 (Chapter 15-17)
4	8/1	Chapter 18	Thermodynamics and Equilibrium
	8/2	Chapter 19	Electrochemistry
	8/3	Chapter 19	Electrochemistry
	8/4		Exam 3 (Chapter 18-19)
5	8/8	Chapter 23	Organic Chemistry
	8/9	Chapter 23/20	Organic Chemistry/ Nuclear Chemistry
	8/10	Chapter 20	Nuclear Chemistry/ Exam 4 (Chapter 20 and 23)
	8/11	Final Examination	Covers chapters 12-20,23

Recommended HW problems and examples (10th edition book)
Chap. 12: 47, 49, 53, 55, 57, 69
Chap. 13: 43,45,46,51,55,63,77
Chap. 14: 35, 43,51,65,73
Chap. 15: 36,51,53,59,67,79
Chap. 16: 33,35,38,50,52,75
Chap. 17: 27,29,37,41,47,59,61
Chap. 18: 31,35,39,41,45,59
Chap. 19: 35,37,49,54,57,63,66,78,82,86

Chap. 20: 19,33,35,37,39,41,43

Chap. 23: 27, 37, 38,39

TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.

- *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.
 JavaScript is enabled.
 Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - [Adobe Reader https://get.adobe.com/reader/](https://get.adobe.com/reader/)
 - [Adobe Flash Player \(version 17 or later\) https://get.adobe.com/flashplayer/](https://get.adobe.com/flashplayer/)
 - [Adobe Shockwave Player https://get.adobe.com/shockwave/](https://get.adobe.com/shockwave/)
 - [Apple Quick Time http://www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words “[click here](#)” to submit an issue via email.



System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

COMMUNICATION AND SUPPORT

Communication: If the instructor needs to contact an individual student, it will be via the student's Texas A&M –Commerce email account.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Attendance Policy: All students are expected to attend classes on a regular basis. The Department of Chemistry adheres to the attendance policy set by the University as stated in the most current Undergraduate Catalog. The attendance record is taken from the **daily sign-in sheet**. A student who is late by more than 5 minutes or fails to sign the sign-in sheet will be counted as missing a lecture. **Excessive absence is defined as missing more than 10% of lectures or more than 10% of the laboratory sessions without excusable reasons.** Excessive absence will be reported to the Dean of the College and the Dean of Students. In addition, **according to the TAMU-Commerce Procedure 13.99.99.R0.001, if a student has excessive absences, the instructor may drop the student from the course.** The instructor will only excuse an absence if the student provides, with appropriate document, an excusable reason allowed by the TAMU-Commerce Procedure **13.99.99.R0.001**. Good class attendance will be necessary in order to pass this course. ***If you miss more than 3 lectures prior to the first exam, I reserve the right to drop you from the course. If you miss more than 5 lectures throughout the course of the semester, I reserve the right to drop you from the course.***

Syllabus Change Policy: The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct Policy: In order to create a “learning environment” free of disruption, you **MUST TURN OFF** your cell phones, MP3 players, PDA’s, Pagers, and any other electronic devices before entering the class. Students are expected to comply with the student code of conduct as stated Student’s Guidebook, Policies and Procedures, Conduct. If the student is failed to comply with the code of conduct and being disrespectful, disruptive to the instructor or the students of the class, the instructor reserves the right to dismiss the student from the class on the first offense. A second offense may constitute dismissal from the course with a failing grade. TAMU-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity expression will be maintained. All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The code of Student Conduct is described in detail in the Students guidebook.
<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Academic Integrity

Cheating and other Breaches of Academic Conduct: Academic cheating, plagiarism, and other forms of academic misconduct may result in removal of the student from class with a failing grade or may in extreme cases result in suspension or expulsion from the University. Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf)
<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a

learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

NONDISCRIMINATION STATEMENT

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

