CHEM 1112 General and Quantitative Chemistry Laboratory II

COURSE SYLLABUS: SPRING 2024

INSTRUCTOR INFORMATION

Instructor: Mrs. Qianying Zhang (Joy)
Office Location: Science 336
Office Hours: MTWR 3:00-4:00 pm
Office Phone: 903-468-8140
University Email Address: Qianying.Zhang@ tamuc.edu

COURSE INFORMATION

Section 01L: Tuesday 2:00 –5:50 p.m.	Room: STC310
Section 02L: Tuesday 2:00 –5:50 p.m.	Room: STC311
Section 03L: Thursday 2:00 –5:50 p.m.	Room: STC310
Section 04L: Thursday 2:00 –5:50 p.m.	Room: STC311

Textbook:

- **The custom lab manual for general chemistry II is available at the campus bookstore.** ISBN: 9781337907712
- **A pair of safety goggles and a combination lock you must bring a lock to your first laboratory meeting.**
- **Appropriate lab attire** (long pants without holes, no open-toed shoes, long hair tied back, long sleeveless clothes).

COURSE DESCRIPTION

General and Quantitative Chemistry Lab II. 4 hours of laboratory per week. This course is part of the University Studies core courses and will meet criteria for laboratory science credits. It is the introduction to methods and techniques of chemical experimentation using quantitative and semi-quantitative procedures to exploring problems in chemistry.

Student Learning Outcomes

1. Students will be able to apply knowledge and skills to safety operate lab equipment and handle, utilize and dispose of chemicals and properly organize and return equipment at the end of experiments.
2. Students will be able to apply knowledge and skills to obtain accurate data needed to complete the experiments.
3. Students will be able to use chemical theories and principles to interpret and discuss data to draw sensible conclusions.
4. Students will be able to apply the conclusions drawn from experiment6s to strengthen the concepts learned from lectures.
5. Students will be able to work cooperatively with your team members to obtain data and complete lab reports.

COURSE REQUIREMENTS

Instructional Methods

You must write down what you observe and measure during the time of the experiment. Compose the laboratory report in sufficient detail to allow someone else to report the experiment exactly. The observations section of the report must be the original notes taken during the course of the experiment (take detailed, legible notes during the experiment). You can also submit a typed version of your observations if you wish, but you must submit your original notes taken during the experiment.

Lab Cleanliness

You will be expected to maintain a clean and orderly lab. At the end of every experiment, your bench space and hood space must be cleaned. Any equipment utilized during the experiment must be cleaned as well (balances, rotovaps, etc.). You should ensure that sinks and floors are also clean. If the lab space and equipment that you utilized during the experiment is left dirty and unorganized, you will be penalized 20% on your lab report.

GRADING

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

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

The lab report with the lowest score will be dropped. The average of the grade for the rest of the eleven laboratories will constitute the laboratory grade.

Prelab	25%
Post-lab	75%
Total	100%

You are required to submit Data and Post Lab /Lab Report in a timely manner. **You will incur a 10% penalty for every day that your lab report is late; thus, if a lab report is 10 days late, you will receive a zero for that report. There will be absolutely no make-ups for laboratory experiments. If you miss a laboratory experiment, that will be your dropped laboratory write-up. If you miss more than one laboratory experiment, you will be assigned a grade of zero for that assignment.** Dishonest scholarship will earn an automatic zero (0) and initiate prosecution to the fullest extent. Incomplete grades may be given only if the student has a current average above 70% and is precluded from completion of the course by a documented illness or family crisis.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements.

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements
LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm
Zoom Requirements:
https://support.zoom.us/hc/en-us/articles/201362023-Zoom-system-requirements-Windows-macOS-Linux

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

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. Other support options can be found here: https://community.brightspace.com/support/s/contactsupport

Interaction with Instructor Statement

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 class. **Excessive absence is defined as missing more than 10% of the class 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.

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

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 Student Guidebook .
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx
Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
https://www.britannica.com/topic/netiquette

TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

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
Undergraduate Student Academic Dishonesty Form
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf
Graduate Student Academic Dishonesty Form
http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf
http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf

Students with Disabilities— ADA Statement

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
Velma K. Waters 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 Notice

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.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit **www.tamuc.edu/counsel**

AI use in course [Draft 2, May 25, 2023]

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

COURSE OUTLINE / CALENDAR

1. **You must bring a lock to your first laboratory meeting.**
2. **Safety goggles, long pants, long sleeves and closed toed shoes are required to be worn during all laboratory experiments.**
3. **The following lab number and name is based on custom lab manual from campus book store.**

Week	Date	Experiment
1	1/16-1/18	Check in equipment, Safety lecture & quiz
2	1/23-1/25	Experiment 1: Softening Hard Water
3	1/30-2/1	Experiment 2: A Molar Mass from Freezing Point
4	2/6-2/8	Experiment 3: The Rate of an Iodine Clock Reaction
5	2/13-2/15	Experiment 4: Le Chatlier's Principle
6	2/20-2/22	Experiment 5: Determination of an Equilibrium Constant
7	2/27-2/29	Experiment 6: The Relative Strengths of Some Acids
8	3/5-3/7	Experiment 7: Equilibria with Weak Acids and Weak Bases
9	3/12-3/14	**Spring break-No lab**
10	3/19-3/21	Experiment 8: An Acid-Base Titration Curve
11	3/26-3/28	Experiment 9: A Solubility Product Constant
12	4/2-4/4	Experiment 10: Qualitative Analysis of Ag^{+}, Cu^{2+}, Zn^{2+}, and Ca^{2+} ions
13	4/9-4/11	Experiment 11: Spontaneity
14	4/16-4/18	Experiment 12: Oxidation-Reduction Reactions
15	4/23-4/25	Check-out