CHEMISTRY 102: CHEMISTRY TUTORIAL II

Instructor Information

Dr. Ben Jang Office: Science 335
Email: Ben.Jang@tamuc.edu Phone: 903-886-5383

Office Hours: MW: 10:00 - 11:00 am, TW: 3:15 - 4:45 pm

Course Materials and Course Information

Lecture textbook: ***General Chemistry***, 10th Edition, Ebbing, Gammon, Brooks/Cole Cengage Learning, Belmont, CA. ISBN: 978-1285051376. The 8th, 9th or 11th edition of the lecture textbook is also fine for you to use. The 11th edition is the newest addition (and the most expensive edition).

Classroom: Section 001: M 8:00-8:50 am in STC135
Section 003: W 8:00-8:50 am in STC146

Course Description: 1 Semester Hour: The course will act as a support to understand the fundamental chemistry covered in Chemistry 1312. Topics include chemical reaction rates, chemical equilibrium, acid-base chemistry, solubility, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry, inorganic chemistry and biochemistry.

Lecture Learning Outcomes / Course Objectives

Upon completion of the course, I intend for my students to have realized a number of objectives.
1. Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, text or art. Be able to critically analyze a chemical problem and deduce a solution to the problem utilizing step-wise processes.
2. Students will be able to interpret, test and demonstrate principles revealed in empirical data and/or observable facts. General chemistry requires good algebra skills. By the end of this course, you should be able to utilize algebraic skills to solve chemical problems.
3. In written, oral, and/or visual communication, A&M-Commerce students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure.
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.

General Content Knowledge Students Should Obtain

1. Relate the structure found in a given molecule to its physical and properties.
2. Know the importance of chemistry and its relationship to other disciplines and our daily lives.
3. Understand the reactivity of compounds, ions, and molecules, and the various qualitative and quantitative methods for describing or depicting chemical reactions.
4. Understand the concept of chemical equilibrium, and the energies that drive chemical

reactions: an introduction to the field of thermodynamics.

5. Use LeChatelier's Principle to predict the effects of concentration, pressure and temperature changes on equilibrium mixtures.
6. Understand oxidation-reduction reactions and be able to calculate voltage difference in voltaic cells. Understand how to balance oxidation-reduction reactions.

Course Requirements

Instructional Methods

Class Procedure: The intent of the course is for you to work in small groups to complete the lesson for that day. You will be required to work in groups of 3-4 students. Groups made of less than 3 students or more than 4 students will not be allowed. I may change the groups periodically. You are expected to work together as a team to answer the questions posed in the lesson. Thus, you are highly encouraged and expected to discuss, with your group members, the lesson and the answers to the questions posed. The instructor for the course is not present to answer the questions for you. Rather, the instructor is present to guide you in your learning efforts. This has proven to be an effective way to learn Chemistry; we will be using methods similar to a National Science Foundation sponsored program called POGIL (Process Oriented Guided Inquiry Learning, www.pogil.org).

Student Responsibilities or Tips for Success in the Course: Pointers to Succeed

The content in this course will cover Chapters 1 through 11 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 coming to the lectures***.** The class 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.

Grading

Your course grade will be based on your participation (80%) and a weekly class assignment(s) grade (20%), as illustrated in the Table below. There are 15 class days in the semester.

Week	Participation grade (0-100 points)*0.8	Weekly Class Grade out of 100 points (total of group work, group quiz, pre-class worksheet, and/or individual quiz) * 0.2	Total points for the week (out of 100)
1			
2			
3			
4			
5			
6			
7			
8			
9	No classes	Spring break	---
10			
11			

12			
13			
14			
15			
16			
(Semester Total Points / 1500 points) *100% = Class Average %			

The final letter grade will be based on a standard scale 90-100% A, 80-89% B, 70-79% C, 60-69% D, and below 60% F. The grades may be curved, if warranted. Incomplete grades may be given only if the student has a current average ≥70% and is precluded from completion of the course by a documented illness or family crisis.

If you fail to sign the attendance sheet for a class period, you will be counted as absent even if you were in class that day; the sign-in sheet is the official record of your attendance in class. If you will miss your class one week, you can attend one of the other sections that same week with instructor approval. This will be your only option for earning credit for that week. There will be absolutely no make-ups for missed class attendance.

Your participation grade is not based on you simply showing up to class. To receive participation credit for the class period you must meet the following requirements:

1. You cannot be *late to class*. Missing the introductory lesson at class time will equate to a non-attendance for that day.
2. You must *participate in the class or group discussion*. Non-participation will equate to a non-attendance for that day.
3. Disorderly conduct will equate to a non-attendance for that day.
4. Your group must work diligently to complete the lesson for that day. If your group does not work diligently to complete the lesson you will receive a non-attendance for that day.

Only non-programmable calculators are allowed on assignments. I recommend purchase of one of the following calculators, which are available for approximately $10.00-$15.00: TI-30X IIS (solar) or TI-30X IIB (battery) or TI-30Xa. NO OTHER CALCULATOR TYPE IS ALLOWED. ALL calculators will be checked before graded assignments in the class. Non-approved calculators will be removed immediately from the student, to be returned at some point after the graded assignment (possibly in class).

TENTATIVE COURSE OUTLINE / CALENDAR

Date	Chapter	Problem Set Related To:
January 13-17	Chapter 12:	Solutions
January 21-27	Chapter 12:	Solutions
January 28 – February 3	Chapter 13:	Rates of Reactions
February 4-10	Chapter 14:	Chemical Equilibrium
February 11-17	Chapter 15:	Acids and Bases

February 18-24	Chapter 15:	Acids and Bases
February 25 - March 2	Chapter 16:	Acid and Base Equilibria
March 3 – 6 & 16	Chapter 17:	Solubility and Complex Ion Formation
March 9 – 13	**No class – Spring Break**	**No class – Spring Break**
March 17 – 23	Chapter 18:	Thermodynamics and Equilibrium
March 24 – March 30	Chapter 18:	Thermodynamics and Equilibrium
March 31 – April 6	Chapter 19:	Electrochemistry
April 7 – 13	Chapter 20:	Nuclear Chemistry
April 14 – 20	Chapter 20:	Nuclear Chemistry
April 21 – 27	Chapter 23:	Organic Chemistry
April 28 - May 1	Chapter 21:	Chemistry of the Main Group Elements
May 4 - 8	No classes	**No class**

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
YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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

The best way to communicate with the instructor is via e-mail: stephen.starnes@tamuc.edu or stop by the instructor's office (Science 339) for clarification of course material and expectations.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

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
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.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
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 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.