



## CHEMISTRY 101: CHEMISTRY TUTORIAL I

### Instructor Information

Dr. Bukuo Ni

Office: Science 303

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Phone: 903-886-5382

Office Hours: Virtual office at D2L or by appointment

### Course Materials

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

Course Description: 1 Semester Hour: The course will act as a support to understand the fundamental chemistry covered in Chemistry 1311. Topics include the scientific method, making measurements, the SI system, dimensional analysis, atomic and molecular structure, chemical formulas, chemical reactions, chemical equations, thermochemistry, quantum theory, electron configurations, periodicity, chemical bonding, states of gases, and states of matter and solutions.

### 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. Know the nature of the bonding in compounds.
2. Relate the structure found in a given molecule to its physical and properties.
3. All students must know the basics of IUPAC nomenclature of compounds.
4. Know the importance of chemistry and its relationship to other disciplines and our daily lives.
5. Understand the basic structures of atoms, ions, and molecules, and ways to quantitatively describe the properties of atoms and molecules in the various phases of pure matter and in mixtures.

6. Understand the reactivity of atoms, ions, and molecules, and the various qualitative and quantitative methods for describing or depicting chemical reactions.
7. Understand the concept of chemical equilibrium, and the energies that drive chemical reactions: an introduction to the field of thermodynamics.
8. Understand the relationship between the electronic configurations of atoms and molecules and their chemical properties: an introduction to the field of quantum mechanics.
9. Understand the basic properties of gases with respect to temperature, pressure, volume and amount of gas.

### Course Requirements

#### Instructional Methods

**Class Procedure:** The intent of the course is for you to work on the problem set questions related to the lesson for that day. You are expected to complete all the questions and submit it to the dropbox on the D2L.

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

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).

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 daily class assignment(s) grade (100%). 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  $\geq 70\%$  and is precluded from completion of the course by a documented illness or family crisis.

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 must work diligently to complete the problem set for that day.
2. You must turn in your completed problem set in the dropbox for that day or before the due day. The answer key will be posted in the day after the due day.
3. If you do not work diligently to complete the questions and don't submit your completed problem set on time, you will receive no credit for that day.

Only non-programmable calculators are recommended 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.

### COURSE OUTLINE / CALENDAR

| Week | Date    | Assignment                      | Due date |
|------|---------|---------------------------------|----------|
| 1    | June 1  | Problem set 1-chapter 1         | June 2   |
|      | June 2  | Problem set 2-chapter 2         | June 3   |
|      | June 3  | Problem set 3-chapter 3         | June 4   |
|      | June 4  | Problem set 4-chapter 3         | June 5   |
| 2    | June 8  | <b>No assignment-Exam 1</b>     | June 9   |
|      | June 9  | Problem set 5-chapter 4         | June 10  |
|      | June 10 | Problem set 6-chapter 4         | June 11  |
|      | June 11 | Problem set 7-chapter 5         | June 12  |
| 3    | June 15 | <b>No assignment-Exam 2</b>     |          |
|      | June 16 | Problem set 8-chapter 6         | June 17  |
|      | June 17 | Problem set 9-chapter 7         | June 18  |
|      | June 18 | Problem set 10-chapter 8        | June 19  |
| 4    | June 22 | <b>No assignment-Exam 3</b>     |          |
|      | June 23 | Problem set 11-chapters 8&9     | June 24  |
|      | June 24 | Problem set 12-chapter 9        | June 25  |
|      | June 25 | Problem set 13-chapter 10       | June 26  |
| 5    | June 29 | Problem set 14-chapter 10       | June 29  |
|      | June 30 | <b>No assignment-Exam 4</b>     |          |
|      | July 1  | Problem set 15-chapter 11       | July 1   |
|      | July 2  | <b>No assignment-Final Exam</b> |          |

### 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](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](mailto: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](mailto: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)

<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](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

<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.