



SYLLABUS

CHEM 1306 (**B-Global**)
 Introduction to General Chemistry
 Spring 2024
 Jan 16, 2024 - May 8, 2024

General Course Information

Information Item	Information
Instructor:	Dr. A. Oseolorun
Section # and CRN:	P01 24159
Office Location:	Rm 230 J New Science Building
Office Phone:	936-261-3119
Email Address:	admoseolorun@pvamu.edu
Office Hours:	TR 11:00 am – 1:00 pm and virtually with an appointment
Mode of Instruction:	Face-to-Face
Course Location:	E E O'Banion Science Bldg. A104
Class Days & Times:	9:30 am - 10:50 am T R
Catalog Description:	<i>CHEM 1306 An introductory course to essential chemical principles including atoms, atomic structure, molecules and compounds, elementary stoichiometry, and calculations, type of chemical reactions, and fundamental principles. The interpretation and evaluation of case studies to develop fundamental knowledge and skills. This course will require a fair amount of writing and Teamwork for health science and non-majors.</i>
Prerequisites:	
Co-requisites:	N/A
Required Text(s):	Chemistry: An Introduction to General, Organic and Biological Chemistry, 13th edition by Karen C. Timberlake Custom edition available at PVAMU bookstore at a lower cost. This version is based on Introduction to General Chemistry, Organic and Biological Chemistry, 13th edition by Karen C. Timberlake. 91234-0 https://www.bkstr.com/Home/10001-10734-1?demoKey=d University Bookstore: Phone:(936) 261-1990. web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d
Recommended Text(s):	Chemistry for Changing Times 14th edition by Terry W. McCreary, Doris K. Kolb, C Alton Hassell, Paula Marshall, and John W. Hill (ISBN-13: 9780321972026) Calculations in Chemistry: An Introduction (Second Edition) eBook or print Author(s): Donald J. Dahm; Eric A. Nelson. Publisher: W. W. Norton & Company Print ISBN: 9780393614367, 0393614360 or e-text ISBN: 9780393616323, 0393616320

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:	Program Learning Outcome Alignment	Core Curriculum Outcome Alignment
1. Define Green and Sustainable Chemistry and connect the 17 United Nations' Sustainability Goals (Critical Thinking and Communication Skills).	ABCD	See Table Below
2. Identify the structure of atoms and molecules and the nature of chemical bonds between atoms (Critical Thinking and Empirical and Quantitative Skills).	ABCD	
3. Analyze and evaluate the properties of acids, bases, salts, and buffers (Critical Thinking and Empirical and Quantitative Skills).	ABCD	
4. Recognize oxidation-reduction reactions and formulate the reaction mechanisms (Critical Thinking and Empirical and Quantitative Skills).	ABCD	
5. Evaluate solution equilibrium and the role of pH values (Critical Thinking and Empirical and Quantitative Skills).	ABCD	
6. Recognize the principle of nuclear radiation and its application in medicine, agriculture, etc. (Critical Thinking).	ABCD	
7. Gain basic knowledge of toxicity and evaluate the toxic effects of radiation on cells and organs (Communication and Critical Thinking).	ABCD	
8. Formulate the relationship and calculate P, V, n, and T using gas laws (Empirical and Quantitative Skills).	ABCD	

Department Goals:

- A. **Critical Thinking Skills:** include creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
- B. **Communication Skills:** to include effective development, interpretation, and expression of ideas through written, oral, and visual communication.
- C. **Empirical and Quantitative Skills:** include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
- D. **Teamwork:** includes the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Chemistry Connection to B-Global Goals:

Chemistry is sometimes referred to as the central science and it is vital to everyday life from the food we eat, the clothes we wear, the cars we drive, the medication we take, and many other aspects of our daily existence. A robust foundation in chemistry is needed in a variety of careers and it is also key to understanding the world we live in. Chemistry is the study of matter, its transformations, and the energy that makes these changes possible. This understanding leads to technological advances that improve the lives of all people. This class helps with the B-Global outcomes of diversity, global awareness, and social responsibility.

Broadening Global Learning Opportunities Building Academic Leader (B-GLOBAL)

This course is also a part of the PVAMUB-Global global citizenship program.

<https://www.pvamu.edu/internationalprograms/bglobal/>



The Global Learning Initiative has three university-level Thematic Student Learning Outcomes on **Diversity, Sustainability, and Global Engagement** ([ECE Curriculum Improvement to Incorporate Global Learning](#)). As social responsibility and global awareness are key requirements of the B-global program, students will be introduced to topics in green and sustainable chemistry in the form of discussion assignments to encourage greater awareness of chemistry's impact around the world and on human life. There will also be infusions of the green chemistry principles throughout the course as an instrument for chemists to design new and beneficial (sustainable) substances and processes. In this course, we will emphasize the interconnectedness of local and global systems, i.e. systems thinking which is a problem-solving strategy that identifies and understands the key part of a system as opposed to an isolated part. This is then followed by investigations into solutions based on system interactions. So, for the student, This teaching approach helps to cultivate critical thinking skills and use scientific principles to solve real-life problems.

Major Course Requirements

Method of Determining Final Course Grade

Course Grade Requirement	Value	Class Point Total
10 Unit Modules		
1. Exams	4 -75 points each	300
2. Discussions/Journals	2 – 10 points each	20
3. Quizzes	5 – vary	65
4. Written Recitation/Homework	4 - vary	115
5. Case Study	1- 25 points	25
Total:		525

Grading Criteria:

A = 100 – 90%

B = 89 – 80%)

C = 79 – 70%

D = 69 – 60%

F = 59% or below

Detailed Description of Major Assignments:

Assignment Title or Grade Requirement	Description
Getting Started	Assessment Quiz + Syllabus Quiz
Module 1	Reading/Writing Assignments + Quiz 1+ HW1 + Discussion 1
Module 2	Reading/Writing Assignments + Exam 1 + HW1 + HW2
Module 3	Reading/Writing Assignments + Quiz 2+ Discussion 2 + Exam 2
Module 4	Reading/Writing Assignments + Exam 3 + Case Study 1+ Quiz 3 + HW 4

Module 5	Reading/Writing Assignments + Quiz 4+ HW 5
Module 6	Reading/Writing Assignments + Exam + Quiz 5
Module 7	Reading/Writing Assignments + Quiz
Module 8	Reading/Writing Assignments + Final Exam
Exams	Review/Final Exam

Required Materials:

Submission of Assignments:

Time Commitment: This course requires getting a good understanding of fundamental principles of chemistry that build on themselves layer by layer, so I recommend spending at least 2 to 3 hours of study/homework time for each hour of class time. Start early and do not procrastinate; time goes by very quickly during the semester. Group study is also highly recommended with peers who are serious about success!

Policy on Plagiarism and/or Cheating: All instances of plagiarism or cheating will result in a referral to the Student Conduct office and the chemistry department.






Exam and Makeup Assignment Policy: Exam schedules must be followed. Makeup examinations will be allowed if the excuse given is university-approved. The university-approved document is submitted immediately after the exam. **NO** dropped exams: all exams will be counted or included in the final class total—Scratch paper and ACS-approved Periodic Table during exams at the instructor's discretion. There should be **NO** expectation of a formula sheet for in-class exams. They are only during final and in-class exams at the instructor's discretion. Students must recall chemical formulas needed at the time of an exam. Students need to bring a Calculator—no cell phone usage during exams as calculators. Each student is responsible for providing Scantron (blue or green color) and Pencils (No. 2). Students with excused absences can take makeup exams within a limited time and time designated by the instructor. A zero score will be recorded for a missed exam if the instructor is not notified in a reasonable time, irrespective of graduation status. Graduating seniors are responsible for making up all missing assignments within the prescribed time limit for grade submission. **At no time should any individual expect the instructor to acquiesce to any unreasonable requests from any graduating senior based on this designation as it pertains to makeup tasks not completed within the stipulated time limit.**

Semester Calendar

Modules	Topic	Assignment/Activity (Online)	Due Date
Start Here/ Course Introduction: Tuesday-Thursday Week 1	Course Introduction	<ul style="list-style-type: none"> • Read the syllabus. • 📺 Lecture 1 videos • 📌 Complete the Basic Math Assessment first day (Tuesday) 	1/16/2024
	Syllabus Review		
	Basic Math Review		
Lecture			1/18/2022

Modules	Topic	Assignment/Activity (Online)	Due Date
TR 9:30 am - 10:50 am **Prerequisite for Module 1		<ul style="list-style-type: none"> 👉 Complete the syllabus quiz (Thursday) 	
Module 1: Tuesday-Thursday Week 2 Lecture TR 9:30 am - 10:50 am	Chapter 1: Chemistry and Measurements Week 2	<ul style="list-style-type: none"> Read Chapter 1 in your textbook book / 📺 Watch Chapter 1 YouTube videos and review PowerPoint lecture slides. Complete the Chapter 1 CHEM 1306 👉 Homework 1 online 	1/25/24
Module 1: Tuesday-Thursday Weeks 3 Lecture TR 9:30 am - 10:50 am	Chapter 2: Chemistry and Measurements continues. Week 3	<p>Re-read Chapter 2 in your textbook book / 📺 Watch Chapter 2 lectures for a refresher on related topics.</p> <ul style="list-style-type: none"> Complete the chapter 1&2 👉 Quiz 1 📄 Discussion 1-Title: Unit Conversion Skills 	1/29/24 1/29/24
Module 2: Tuesday-Thursday Weeks 4 and 5 Lecture TR 9:30 am - 10:50 am	Chapter 3: Matter and Energy Week 4 and 5 Content - State of Matter Transformations and Energy Units	<ul style="list-style-type: none"> Read your textbook book / 📺 Watch chapter 3 lectures videos. 👉 HW 1 👉 HW 2 👉 Exam 1 	2/1/24
Module 3: Tuesday-Thursday Weeks 6 Lecture	Nuclear Weeks 6	<ul style="list-style-type: none"> Read Chapter 5 in your textbook book / 📺 Watch Chapter 5 lectures 	

Modules	Topic	Assignment/Activity (Online)	Due Date
TR 9:30 am - 10:50 am		<ul style="list-style-type: none"> • Complete quiz 2 • <input type="checkbox"/> Discussion 2 • 📄 HW 2 	
Module 4: Tuesday-Thursday Weeks 7 - 9 Lecture TR 9:30 am - 10:50 am	Chapters 4: Title "Atoms and Elements" and Chapter 6: Inorganic and Molecular Compounds Weeks 7 - 9 Topics include - Electronic Structure and the Periodic Table Week 8: Midterm week	<ul style="list-style-type: none"> • Read Chapter 4 in your textbook book / 📺 Watch Chapter 4 lectures. Read Lewis Structures in Chapter 6 to gain a better understanding of bonding. • Read Chapter 6 in your textbook book / 📺 Watch Chapter 6 lectures. • ✍ Complete Case Study 1 assignment • 📄 Complete homework assignment HW 4 • 📄 Exam 3 • 📄 Quiz 3 • Complete the Midterm exam in week 8 	
Module 5: Tuesday-Thursday Lecture TR 9:30 am - 10:50 am	Chapter 7 Title: "Chemical Quantities and Reactions" Weeks 10- 11. (Stoichiometry calculations)	<ul style="list-style-type: none"> • HW 5 • Sig Fig Quiz 3 • ✍ Take exam 3 	

Modules	Topic	Assignment/Activity (Online)	Due Date
<p>Module 6: Tuesday-Thursday</p> <p>Lecture TR 9:30 am - 10:50 am</p>	<p>Chapter 8 - Title: " Gases "</p> <p>Weeks 11 and 12</p>	<ul style="list-style-type: none"> • Read Chapter 8 in your textbook book /  Watch Chapter 8 lectures. •  Complete Quiz 5 	
<p>Module 7: Tuesday-Thursday</p> <p>Lecture TR 9:30 am - 10:50 am</p>	<p>Chapter 9: Title: Solutions</p> <p>Weeks 13 and 14</p>	<ul style="list-style-type: none"> • Read Chapter 9 in your textbook  Watch book / Watch Chapter 9 lecture videos. 	
<p>Module 8: Tuesday-Thursday</p> <p>Lecture TR 9:30 am - 10:50 am</p>	<p>Chapter 10: Title: Acids, Bases, and Equilibrium</p> <p>Weeks 15 and 16</p>	<ul style="list-style-type: none"> • Read Chapter 10 in your textbook book /  Watch chapter 10 lectures. •  Complete the Final Exam in Common Exam week • Make work in week 16 with approval 	

Student Support and Success

John B. Coleman Library

The John B. Coleman Library's mission is to enhance the scholarly pursuit of knowledge and to foster intellectual.

curiosity, and to promote lifelong learning and research through our innovative services, resources, and culture programs, which support Prairie View A&M University's global mission of teaching, service, and research. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty. Website: <https://www.pvamu.edu/library/>; Phone: 936-261-1500

The Learning Curve (Center for Academic Support)

The Learning Curve offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: TI-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to Take Notes, Study Buddy, 5-Day Study Guide). The Learning Curve is a national certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library Rm. 207F. Phone: 936-261-1561

The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS)

The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is designed to help Prairie View students in their second year and beyond navigate toward graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library Rm. 306. Phone: 936-261-1040

Writing Center

The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, and audience awareness, organization, research, and citation. Students taking online courses or courses in the Northwest Houston Center or College of Nursing may consult remotely or by email. Location: Hilliard Hall Rm. 121. Phone: 936-261-3724.

Student Counseling Services

The Student Counseling Services unit offers a range of services and programs to assist students in maximizing their potential for success: short-term individual, couples, and group counseling, as well as crisis intervention, outreach, consultation, and referral services. The staff is licensed by the State of Texas and assists to students who are dealing with academic skills concerns, situational crises, adjustment problems, and emotional difficulties. Information shared with the staff is treated confidentially and in accordance with Texas State Law. Location: Owens-Franklin Health Center Rm. 226. Phone: 936-261-3564

Testing

The Department of Testing administers College Board CLEP examinations, the HESI A2 for pre-nursing majors, LSAT for law school applicants and MPRE for second-year law students, the Experiential Learning Portfolio option, the Texas Success Initiative (TSI) Assessment, which determines college readiness in the state, and exam proctoring, among other services such as SAT and ACT for high school students. Location: Delco Rm. 141. Phone: 936-261-4286

Office of Diagnostic Testing and Disability Services

As a federally mandated educational support unit, the Office of Disability Services serves as the repository for confidential disability files for faculty, staff, and students. For persons with a disability, the Office develops individualized ADA letters of an accommodation request. Other services include learning style inventories, awareness workshops, accessibility pathways, webinars, computer laboratory with adapted hardware and software, adapted furniture, proctoring of non-standardized test administrations, ASL interpreters, ALDs, digital recorders, Livescribe, Kurtzweil, and a comprehensive referral network across campus and the broader community. Location: Evans Hall Rm. 317. Phone: 936-261-3585

Veteran Affairs

Veterans Services works with student veterans, and current military and military dependents to support them. Transition to the college environment and continued persistence to graduation. The Office coordinates and certifies benefits for both the G.I. Bill and the Texas Hazlewood Act. Location: Evans Hall Rm. 323. Phone: 936-261-3563

Office for Student Engagement

The Office for Student Engagement delivers comprehensive programs and services designed to meet the co-curricular needs of students. The Office implements inclusive and accessible programs and services that enhance Student development through exposure to and participation in diverse and relevant social, cultural, intellectual, recreational, community service, leadership development, and campus governance. Location: Memorial Student Center Rm. 221. Phone: 936-261-1340

Career Services

Career Services supports students through professional development, career readiness, and placement and employment assistance. The Office provides one-on-one career coaching, interview preparation, resume and letter writing, and career exploration workshops and seminars. Services are provided for students at the Northwest Houston Center and College of Nursing in the Medical Center twice a month or on a requested basis. Distance Learning students are encouraged to visit the Career Services website for information regarding the services provided Location: Evans Hall Rm. 217. Phone: 936-261-3570

University Rules and Procedures

Disability Statement (Also See Student Handbook):

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 reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please contact Disability Services, in vans Hall, Room 317, or call 936-261-3585/3.

Academic Misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of Academic Dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered, giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's work also constitutes plagiarism.

Nonacademic Misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual Misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Title IX Statement

Prairie View A&M University (PVAMU) is committed to supporting students and complying with Texas A&M University System non-discrimination policy. It seeks to establish an environment that is free of bias, discrimination, and harassment. If you experience an incident of sex- or gender-based discrimination, including sexual harassment, sexual assault, or attempted sexual assault, we encourage you to report it. While you may talk to a faculty member

about an incident of misconduct, the faculty member must report the basic facts of your experience to Ms. Alexia Taylor, PVAMU's Title IX Coordinator. If you would like to speak with someone who may be able to afford you privacy or confidentiality, some individuals can meet with you. The Title IX Coordinator is designated to handle inquiries regarding non-discrimination policies and can assist you with understanding your options and connect you with on- and off-campus resources. The Title IX Coordinator can be reached by phone at 936-261-2123 or in Suite 013 in the A.I. Thomas Administration Building.

Class Attendance Policy (See Catalog for Full Attendance Policy)

Prairie View A&M University requires regular class attendance. Attending all classes supports the full academic development of each learner whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video and/or the Internet.

Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in the assignment of a grade of "F". Absences are accumulated beginning with the first day of class during regular semesters and summer terms. Each faculty member will include the University's attendance policy in each course syllabus.

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rest with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

TECHNICAL CONSIDERATIONS

Minimum Recommended Hardware and Software:

- Intel PC or Laptop with Windows 7; Mac with OS X; Smartphone or iPad/Tablet with Wi-Fi
- High-speed Internet access
- 8 GB Memory
- Hard drive with 320 GB storage space
- 15" monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse

• most current version of Google Chrome, Safari, Internet Explorer, or Firefox

Note: Be sure to enable Java & pop-ups in the Web browser preferences

Participants should have basic proficiency in the following computer skills:

- Sending and receiving email
- A working knowledge of the Internet
- Proficiency in Microsoft Word (or a program convertible to Word)
- Proficiency in the Acrobat PDF Reader
- Basic knowledge of Windows or Mac OS.

Netiquette (online etiquette):

Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussion boards. Foul or abusive language will not be tolerated.

Technical Support:

Students should go to <https://mypassword.pvamu.edu/> if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

Communication Expectations and Standards:

Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

Discussion Requirement:

Online courses often require minimal to no face-to-face meetings. However, conversations about the readings,

Lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplished by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, they should be copied and pasted to the discussion board.