DAKOTA COLLEGE AT BOTTINEAU

COURSE SYLLABUS

Course Prefix/Number/Title: CHEM 115- Introductory Chemistry

Number of Credits: 4

Course Description: This course provides an introduction to fundamental chemical concepts, including measurements, ionic and covalent compounds, chemical calculations, states of matter, energy, solutions, reactions, and chemical bonding. It is designed specifically for non-science majors.

Pre-/Co-requisites: ASC93

Course Objectives:
• **Atoms, Molecules, and Chemical Bonds:** Understand the structure and properties of atoms and molecules, including chemical bonds (ionic, covalent, metallic) and how they influence compound formation and properties.
• **Chemical Reactions and Stoichiometry:** Learn to identify and balance chemical reactions, perform stoichiometric calculations, and predict reactant and product quantities in reactions.
• **Phases of Matter:** Explore the properties of solids, liquids, gases, and plasmas, phase transitions, and the impact of temperature and pressure on these states.
• **Scientific Methods:** Gain proficiency in the scientific method, including hypothesis formulation, experimental design, data analysis, and effective communication of results.
• **Acids and Bases:** Understand the properties and theories of acids and bases, pH and pOH, and their role in chemical reactions and everyday applications.
Instructor: Dr. Neysha Tirado-Class

Office: NSC 112

Office Hours: MF : 8am-9am/10am-11am and F: 8am-9am

Phone: (813)-340-1929

Email: neysha.tirado@dakotacollege.edu

Lecture/Lab Schedule: MWF: 9am-9:50am Lecture / Th: 9am-10:50am Lab

Textbook(s): Introductory Chemistry, by Zumdahl, 6th edition.

Course Requirements: Grading: Grades will be based on total points using the following percentage system: 100-90, A: 89-80, B; 79-70, C; 69-60, D; <60, F. Exams, assignments, quizzes, and lab reports will be used to determine the final grade. IMPORTANT! Any grievances concerning graded material must be addressed within one week from the time the material is returned to the student.

Grading Outline: (800pts Total)

Exams (100pts each)	300pts
Final Exam	100pts
Lab Final Exam	100pts
Lab Reports (20 pts each)	200pts
Research Assignment	100pts

Exams: Exams may contain short answer/essay, multiple choice, completion and problems. There will be no makeup exams unless prior arrangements have been made. If you need to be gone for a school related activity or family event, you will be expected make arrangement prior to the event and take the exam before you leave**.** Athletes must provide a copy of their schedules season games if they align with any scheduled exam by the 3rd week of classes.
Assignments: There will be one major research assignment during the semester. This will be discussed in class and detailed instructions and grading rubric are available on Blackboard assignment modules. Assignments are due **BEFORE** the scheduled class time of the due date.
Laboratory: The laboratory portion of the course provides an opportunity to integrate lecture concepts with observable activities. Attendance at lab is mandatory! Failure to wear proper PPE will result in a reduction in lab report grades and continued omission will result in removal from lab activities and a loss of all remaining lab points available. To obtain credit, you must be actively involved in the laboratory activities. Labs will be due on the scheduled lab date via Blackboard Lab modules **BEFORE** the start of Lab.

Tentative Course Outline:

Week	Book	Topic	Lab
Week 1	Ch. 1	Scientific Method	No Lab
Week 2	Ch. 2	Measurements & Calculations	Accuracy and Precision in Measure
Week 3	Ch. 3-4	Matter	Density
Week 4	Ch. 4	Chemical Foundations	Physical vs Chemical Changes
Week 5		Review & **Exam 1**	Aqueous Reactions
Week 6	Ch. 5-6	Nomenclature and Intro to Chemical Reactions	Percent Composition of a Hydrate + Quiz 2
Week 7	Ch. 7	Reactions in Aqueous Solutions	Relating moles to Coefficients
Week 8	Ch. 8-9	Chemical Compositions & Quantities	Mass & mole Relations + Quiz 3
Week 9		Review and **Exam 2**	Calorimetry
Week 10	Ch. 10	Energy	Flame Tests
Week 11	Ch. 11-12	Atom and Chemical Bonding	Molecular Geometry
Week 12	Ch. 12	Molecular Geometry and Exam 4 (Ch. 10-12)	Lab Final Exam
Week 13		Review and **Exam 3**	
Week 14	Ch. 13-14	Gases, Liquids and Solids	
Week 15	Ch. 13-14	Gases, Liquids and Solids	
Week 16		**Final Exam**	

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

- General Education Competency 1: Identifies the interrelationships between humans and their environment
- Learning Outcomes #1- Applies scientific method on inquiry

Relationship to Campus Focus: This course aligns with the campus theme by examining how chemistry influences both our daily lives and the environment. Students will explore the practical applications of chemistry in everyday scenarios, from household products to environmental issues, and understand its broader impact on the world around us. By the end of the course, students will appreciate the significance of chemistry in both their current experiences and future career paths, equipping them with knowledge applicable to real-world challenges and opportunities.

Classroom Policies:

- Make-up exams should be scheduled in advance, no make-up exams will be allowed in the event of an unexcused absence.
- If you must be absent for a school related or family event, you are expected to make prior arrangements and take the exam prior to the event. If you are given permission to take a late exam you will have 48 hours to make it up.
- Electronics policy: Laptops and Tablets are allowed during the class for notetaking and access to resources. Cellphones are not allowed during the class period. Student will be asked once to put the phone away, if asked again you will be asked to leave the class.
- Be respectful of other students, instructors, and guests.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:
According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs:
Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

Title IX:
Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.

AI Student Policy:
Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

RESPONSIBILITIES

Students	• Responsible to follow the syllabus and assignment instructions regarding use of generative AI for all academic work. • Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment.

	• In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.
Faculty	• Determine if the use of generative AI could enhance student learning in any assignment of project. • Clearly indicate in all course syllabi if generative AI is allowable for any academic work. • If allowable, give specific parameters for how and when generative AI may be used. • If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.