

Course Prefix/Number/Title: Chem. 115, Introductory Chemistry

Number of Credits: 4

Course Description: Introduction to basic chemical concepts including measurements, ionic and covalent compounds, chemical calculations, states of matter, energy, solutions, reactions and chemical bonding. The course is designed for non-science majors.

Pre-/Co-requisites: ASC 93

Course Objectives:

1. Students will gain an understanding of the nature of atoms, molecules, elements, chemical bonds and compounds.
2. Students will gain a basic understanding of the changes that take place in chemical reactions. Ability to perform simple stoichiometry calculations.
3. Students will gain an understanding of the phases of matter.
4. Students will gain an understanding and use of scientific methods
5. Students will gain an elementary understanding of the nature of acids and bases.

Instructor: Tim Bohinski, Ph.D.

Office: NSC 111

Office Hours: contact Professor to setup times

Phone: 760-515-7057

Email: tim.bohinski@dakotacollege.edu

Textbook(s): OpenStax 2e (<https://openstax.org/details/books/chemistry-2e>)

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, research paper, and homework 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.

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| Exams (3) (100 pts each) | 300pts | |
| Lab Reports (8) (25 pts. Each) | 200pts | |
| Quizzes (10) (10pts. Each) | | 100pts |
| | <u>total</u> | |
| | 600pts | |

Exams: There will be three exams during the course of the semester. 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.

Lecture: There will weekly lectures and powerpoints that will provide the basis of the content of the course. Quiz and exam questions will be based on this content. Lecture may not cover everything assigned in the reading, but everything assigned is exam material. If you do not understand something in the readings, please ask questions.

Laboratory: The laboratory portion of the course provides an opportunity to integrate lecture concepts with observable activities. All labs will be done at your own home using common house supplies or will be paper based labs some weeks. All physical labs may require some purchasing of materials that you can easily get at the local grocery store (only a few dollars worth)

Tentative Course Outline:

| Week | Chapter and Reading Assignment | Lab Topic |
|------|--------------------------------------|--------------------------|
| 1 | Chapter 1 scientific method | Lab Safety Questionnaire |
| 2 | Chapter 2 and 3 | Lab and Quiz |
| 3 | Chapter 4 | Lab and Quiz |
| 4 | First Exam Review | N/A |
| 5 | Chapter #5 Exam Chapter #1-4 | Lab |
| 6 | Chapter #6 | Quiz |
| 7 | Chapter #7 | Lab |
| 8 | Chapter #9 | Lab and Quiz |
| 9 | Exam chapters #5-9(except 8) | N/A |
| 10 | Ch. 10 and 11 | Lab and Quiz |
| 11 | Chapter #12 | Quiz |
| 12 | Chapter #13-14 | Lab and Quiz |
| 13 | Chapter #20 pages 427-444 | Quiz |
| 14 | Chapter #21 pages 452-473, Solutions | Lab and Quiz |

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| 15 | Final Exam Review | Quiz |
| 16 | Final Exam (Weeks 10-15) | |

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 methods of inquiry

Learning Outcomes #3- Applies scientific information in everyday life

Relationship to Campus Focus: This course addresses the campus theme by incorporating the role that chemistry plays in our everyday life and the impact it has on our natural world. In addition students will use technology to conduct labs as well as study how technology can be used in chemistry. The course will address the role of chemistry in their everyday life as well as in their future.

Classroom Policies: make-up for missed exams will not be allowed unless prior arrangements have been made. 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.

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.