

Introductory Chemistry Syllabus
Fall 2011

Course prefix/number/title: Chem. 115, Introductory Chemistry

Number of credits: 4

Course Description: The goal of Introductory Chemistry is to provide students with a foundation in chemical concepts and principles. The class consists of three one hour lectures and one two hour lab period. The class is designed for non-science orientated majors and is a requisite or pre-requisite for most nursing programs in North Dakota.

Pre-/Co-requisites: none

Course Objectives: Introductory Chemistry is designed to provide a firm foundation in chemical concepts and principles so students will develop and appreciation of the vital role that chemistry plays in their everyday lives.

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Office Hours: MTWF 1:00-1:50pm

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Lecture/Lab Schedule: lecture 11:00-11:50 pm, MWF Lab 8:00-9:50 am

Text: 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, 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.

Exams (5)	500pts
Lab Reports (25 pts. Each)	300pts
Final Lab	100pts
Quizzes (10pts. Each)	<u>100pts</u>
	1000pts

Exams: There will be five exams during the course of the semester. The last exam will be just the material covered since the sixth exam plus a few questions from throughout the semester. A pre-test and post test will be given at the beginning of the year to assist in planning the course to fit the needs of the students. Should a situation arise that dictates a change in this schedule, the change will be announced a least one week in advance. Exams may contain short answer/essay, multiple choice, and problems. Periodic tables may be used on the exams and will be provided by the instructor. **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.**

Homework: Homework will be assigned throughout the semester and will be discussed in class, but will not be graded. Homework is designed to prepare you for exams and quizzes. These quizzes will be unannounced throughout the semester. You are expected to read the assigned pages prior to class. Lecture may not cover everything assigned in the reading, but everything assigned is exam material. If you do not understand something in the readings, it is your responsibility to ask questions.

Laboratory: The laboratory portion of the course provides an opportunity to integrate lecture concepts with observable activities. You will work in groups of 2-3 students. If your lab partners are not here, you do not move to another group without permission. **Chemical splash safety goggles** and metric ruler are required and may be purchased at the bookstore. Failure to wear goggles 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. Attendance at lab is mandatory. There are no excused absences; however you may be able to reschedule one missed lab, if approved by the instructor. A missed lab must be made up within a week. To obtain credit, you must be actively involved in the laboratory activities. Regular lab reports are due at the beginning of the next lab period. Late lab reports will not be accepted. The labs are to be scored as follows:

10 points for active participation – individual deductions can be made.

15 points for lab write-ups

The final lab will be an application of procedures learned throughout the semester you will be graded on your use of the scientific method, critical thinking skills and the completeness of your data, analysis and conclusions.

Final Lab: A special activity involving application of the principles of scientific method and inquiry will occur the last two lab sessions and are due at the end of the last scheduled lab day. This will be covered initially in the first lab of the semester and once more as you begin the final project.

<u>Lecture</u>	<u>Chapter and Reading Assignment</u>	<u>Lab Topic</u>
Week 1	Ch. 1-2, Pages 1-18 Ch. 2, Pages 18-33	safety, equipment, scientific method
Week 2	Ch. 2-3, Pages 33-66 Ch. 3, wrap-up and review	measurement, accuracy, density
1/7/11	<u>Chapter #1-3 Exam</u>	
Week 3	Ch. 4, p. 72-88 Ch. 4, pages 89-104	percent composition
Week 4	Ch. 5, Pages 112-126 Ch. 5&6, Pages 126-149	physical & chemical change, chemical Equations
Week 5	Ch. 6&7, Pages 149-175 Ch. 7, Pages 175-191 Ch. 4-7 wrap up and review	
9/26/11	<u>Ch. 4-7 Exam</u>	
Week 6	Ch. 8, Pages 203-218 Ch. 8, Pages 218-229	chemical reactions and rates of reaction
Week 7	Ch. 9, Pages 239-251 Ch. 9, Pages 251-259	
Week 8	Ch. 8-9 wrap-up and review	
10/26/11	<u>Ch. 8-9 Exam</u>	
Week 9	Ch. 10, Pages 271-286 Ch. 10, Pages 287-297 Ch. 11, Pages 303-316	molecular geometry and valence electrons
Week 10	Ch. 11, Pages 317-332 Ch. 12, Pages 341-356	
Week 11	Ch. 12, Pages 356-373	
11/4/11	<u>Ch. 10-12 Exam</u>	
Week 12	Ch. 13, Pages 387-401 Ch. 13, Pages 401-416	solubility and concentration
Week 13	Ch. 14, Pages 427-444 Ch. 15, Pages 451-462	Flame tests
Week 14	Ch. 15, Pages 462-473	
11/25/11	<u>Ch. 13-15 Exam</u>	
Week 15	Ch. 16, Pages 487-507 Ch. 17, Pages 515-526 Ch. 17, Pages 526-541	Acids, Bases, and Titration
Week 16	Ch. 18, Pages 553-566 Ch. 18, Pages 566-575	

12/9/11 Ch. 16-18 Exam
12/13/11 Final Exam Review
12/14/11 Final Exam

Final Lab

General Education Goals/Objectives: This course meets General Education Goal 1: Explains the interrelationships between chemistry and their environment and the role of science in their lives. Specific objectives include:

- 1) Demonstrates the application of the scientific method of inquiry (Objective #1).
- 2) Demonstrates an awareness of the role of science in everyday life (Objective #3)

Relationship to Campus Theme: 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: I will not allow make-up for missed exams 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. I will allow you to make up a one lab session provided it is done within a week of the missed lab. In the event of a true emergency that you can document, I will consider an oral makeup exam.
- Cell phone and related technology are prohibited in the classroom at all times. It is recommended that you do not bring your cell phone into the classroom or, at the very least, turn it off.
- Be respectful of other students, technicians, instructors, and guests.

Academic Integrity: All students are expected to adhere to the highest standards of academic integrity. Dishonesty in the classroom or laboratory and with assignments, quizzes and exams is a serious offense and is subject to disciplinary action by the instructor and college administration. For more information, refer to the Student Handbook.

Disabilities and Special Needs: If you have a disability for which you need accommodations, you are encouraged to contact your instructor and the Learning Center (228-5479 or 1-888-918-5623) to request disability support services as early as possible during the beginning of the semester