Introductory Chemistry Syllabus Fall Semester 2010

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 12:30-2pm or by arrangement
E-mail: angie.bartholomay@dakotacollege.edu
Lecture/Lab Schedule: 11:00-11:50 am, MWF; Lab: Tuesday 8:00-9:50
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 (7)	700pts
Lab Reports (25 pts. Each)	300pts
Final Lab	100pts
Quizzes (10pts. Each)	100pts
	1200pts

Exams: There will be seven 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 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.

Research: A short 2 page research paper discussing current applications of science in your everyday life. You will be expected to use standard research paper formats which include a works cited page as well as citations in the text of the paper itself. See Dr Albrightson or Mr. Porter for assistance in using the proper format for your paper.

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.

Lab Schedule	**Topic**
8-24	No Lab.
8-31	Safety, Equipment, Scientific Method
9-7	Measurement, Accuracy, Density
9-14	Elemental Properties, Percent Composition
9-21	Bonding, Chemical, Formulas
9-28	Physical/Chemical Change, Chemical Equations
10-5	Chemical Reactions and Rates of Reaction
10-12	Atoms, Molecules and Relative Atomic Mass
10-19	Molecular Geometry and Valence Electrons
10-26	Thermodynamics and Gas Laws
11-2	Solubility and Concentration
11-9	Fame tests
11-16	Acids, Bases, and Titration
11-23	Reversible Reactions, Moles and Molarity
11-30	Qualitative analysis
12-7	Final Lab
12-14	Final Lab

Lecture	**Chapter and Reading Assignment**
8-25	Ch. 1-2, Pages 1-18
8-27	Ch. 2, Pages 18-33
8-30	Ch. 2-3, Pages 33-66
9-1	Ch. 3, wrap-up and review
9-3	**Test Chapter #1-3**
9-6	**Labor Day – No Class**
9-8	Ch. 4, p. 72-88
9-10	Ch. 4, pages 89-104
9-13	Ch. 5, Pages 112-126
9-15	Ch. 5&6, Pages 126-149
9-17	Ch. 6&7, Pages 149-175
9-20	Ch. 7, Pages 175-191
9-17	Ch. 4-7 wrap up and review
9-24	**Ch. 4-7 Exam**

9-27	Ch. 8, Pages 203-218
9-29	Ch. 8, Pages 218-229
10-1	Ch. 9, Pages 239-251
10-4	Ch. 9, Pages 251-259
10-6	Ch. 8-9 wrap-up and review
10-8	**Ch. 8-9 Exam**
10-11	**NO CLASS- Assessment Day**
10-13	Ch. 10, Pages 271-286
10-15	Ch. 10, Pages 287-297
10-18	Ch. 11, Pages 303-316
10-20	Ch. 11, Pages 317-332
10-22	Ch. 12, Pages 341-356
10-25	Ch. 12, Pages 356-373
10-27	**Ch. 10-12 Exam**
10-29	Ch. 13, Pages 387-401
11-1	Ch. 13, Pages 401-416
11-3	Ch. 14, Pages 427-444
11-5	Ch. 15, Pages 451-462
11-8	Ch. 15, Pages 462-473
11-10	**Ch. 13-15 Exam**
11-12	Ch. 16, Pages 487-507
11-15	Ch. 17, Pages 515-526
11-17	Ch. 17, Pages 526-541
11-19	Ch. 18, Pages 553-566
11-22	Ch. 18, Pages 566-575
11-24	**Ch. 16-18 Exam**
11-29	Ch. 19, Pages 583-600
12-1	Ch. 19, Pages 600-607
12-3	Ch. 20, Pages 607-620
12-6	Ch. 20, Pages 620-635
12-8	Ch, 20, Pages 635-643
12-10	Ch. 21, Pages 655-668
12-13	Ch. 21, Pages 668-677
TBA	**Final Test/Ch. 19-21**

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