

Chemistry 1405.40
Introductory Chemistry - Online Section - Summer 2012

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Orientation Meeting: The orientation for Chemistry 1405.40 will be online at <http://www.brazosport.edu/sites/CurrentStudents/Faculty/JudyChu/Documents/1405%20-%20internet%20schedule.html>.

All students are required to become familiar with the material in this web page.

INTRODUCTION:

CHEM 1405 - Introductory Chemistry, Internet Section, is offered as an online learning class using a combination of the internet and a textbook. Brazosport College is pleased to welcome to this course students from the Virtual College of Texas, as well as students from the Brazosport area. The online section of CHEM 1405 is designed to replace the traditional lecture section of CHEM 1405. To complete the course, you also must be enrolled in a separate lab section, either CHEM 1405L.40, the internet lab section, which is a take-home lab, or the traditional CHEM 1405L, which is held on campus. If you are a Brazosport College student, you have the option of choosing either the traditional lab section which meets on campus once a week, or the take-home lab section. For Virtual College students, you are automatically registered for the take-home lab. The take-home lab consists of a series of experiments to be performed each week using materials commonly found in your kitchen, bathroom and other places around your home. You will perform an experiment, record observations, and then answer questions and draw conclusions based on your data. To pass the course, the student must successfully complete the laboratory portion with a grade of D or better.

GENERAL COURSE OBJECTIVES

This course is designed to help the student:

- A. Unit 1
 - a. Learn the basic terms used to describe matter and energy.
 - b. Understand the relationship of the masses of elements and compounds to the unit of measure, the mole.
 - c. Understand the relationship of atomic structure to chemical properties.
 - d. Predict the properties of element based on its position in the periodic table.
- B. Unit 2
 - a. Determine the names and formula of chemical compounds.
 - b. Develop a good understanding for the relationship between percent by mass and the mole. Be able to convert from moles to grams and grams to moles.
- C. Unit 3
 - a. Write and balance chemical equations.
 - b. Use the concept of stoichiometry to determine quantities of reactants needed and products formed in a chemical reaction.
 - c. Identify the element oxidized, the element reduced and the oxidizing and reducing agents in a redox reaction.
- D. Unit 4
 - a. Obtain a basic understanding of the ideal gas law, i.e. the effect of pressure and temperature on volume.
 - b. Understand the relationship between mass percent and molarity and how to convert from one to another. Also understand the dilution formula and how to use it.
- E. Unit 5

- a. Distinguish between organic and inorganic compounds. Draw structural formulas and name the alkanes, alkenes and alkynes. Distinguish between saturated, unsaturated, and cyclic hydrocarbons.
- b. Discuss the general formula, names, structure and uses of alcohols, ethers, aldehydes, ketones, carboxylic acids and esters.
- c. Become familiar with monomers and polymers. Be exposed to polymer manufacturing and polymer evaluation technology.

F. Lab

- a. The laboratory exercises should give the student practice in making observations based on the experiments.
- b. The student should learn to write reports that are based on observations that were made and to draw conclusions that are supported by the observations.

REQUIRED MATERIALS:

Text: Russo, S. and Silver, M., [Introductory Chemistry, 4th Edition](#), ISBN-13: 978-0-321-66301-6, Pearson/Benjamin Cummings, 2011.

Lab Manual: The lab manual is posted in [Desire2Learn](#).

Scientific Calculator: Any calculator labeled "scientific" is sufficient.

Safety Shields or Goggles: must meet ANSI Z87.1-1989 certification. They are usually available at any building supply or hardware store.

Brazosport College students can pick up these materials in the campus bookstore. Virtual College students can order the textbook from the Brazosport College bookstore at 979-230-3410. You will need your credit card number and shipping information.

CONNECTING TO THE INTERNET CLASS:

Access the course by going to: <https://online.brazosport.edu/index.asp>

Brazosport College students: Follow the instructions in "[How to Access Desire2Learn -Local](#)" to login to the course in Desire2Learn.

VCT students: Follow the instructions in "[How to Access Desire2Learn- VCT](#)" to login to the course in Desire2Learn.

For help with login to Desire2Learn, email your problems to helpdesk@brazosport.edu.

GRADING:

Final grade will be determined by the following system: Total possible points = 100; A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 0-59.

Homework assignments will account for 15% of your course grade (Check the course schedule and calendar each week for assignments). These will be graded based on completion.

Desire2Learn chapter quizzes will account for 15% of your course grade (check the Desire2Learn course calendar each week for the availability date of each chapter quiz).

Three equally weighted exams will account for 50% of your course grade. You will have a window of about one week to take each exam. Each exam will be available in the LAC (for Brazosport College students), or your local testing center (for Virtual College students) on Monday for the dates listed in the class schedule. Make an appointment with the LAC or your local testing center to complete the exam. You will need your student ID and a number 2 pencil. Scantrons are provided. The following support materials are allowed during the exam: periodic table, one 8"x11" page of notes, and a scientific calculator. If you miss an exam, it is very important that you make arrangements to make up the exam within one week of the missed exam. Otherwise, you will receive a zero for the missed exam.

Your laboratory average will account for 20% of your course grade.

HOMEWORK FORMAT:

Each homework assignment should be clearly labeled with your name, date, and chapter of the assignment on the upper left-hand corner. As you perform the reading assignments, keep a notebook and pencil handy and jot down notes to yourself. This will help you to understand the concepts. Remember, chemistry is an interactive science; you will not learn by passively reading the material. When you arrive at **WorkPatches** (conceptual practice problems interwoven into the text) in your reading assignments, work them out!! Keep a time sheet of your study habits. The time sheet should record all the times that you spend working on this class. Turn this time sheet in with your homework assignment. You should plan to spend at least 1 hour per day or 7 hours per week for the class. Adjust your time upward as needed.

LAB REPORT FORMAT:

Each lab report should be clearly labeled with your name, date, and experiment number on the upper left-hand corner. The format of the report is as follows:

- Title of experiment.
 - Observations
 - Include all the data you have taken and all observations you have made in the course of the experiment
 - Include drawings or graphs, if any.
 - Analysis and Questions
 - This is where you record all answers to the numbered questions.
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SUBMITTING YOUR WORK:

You can turn in your homework assignments and lab reports several ways. They are:

- Submit as an attached document in Desire2Learn "Dropbox". This is the preferred method.
- Drop off assignments in the LAC. The LAC staff will collect them in Dr. Chu's folder. This is practical only for Brazosport College students.
- Fax to Dr. Chu at 979-230-3559. If you choose this method, include a cover sheet with Dr. Chu's name and your name and phone number on it.

Graded homework and lab reports can be picked up at the LAC. They are kept in the "Graded Homework" folder. Homework and lab reports submitted by VCT students will not be returned. Instead, your grades will be updated through Desire2Learn and through e-mail if requested.

DUE DATES:

Assignments are due the following Monday. In other words, the assignments for the first week of classes are due on Monday of the second week of classes.

- Online submissions through D2L's "Dropbox" are active until midnight, Monday.
 - If you submit your work to the LAC, it must be turned in before the LAC closes on Monday (9:30 pm).
 - If you submit your work by fax, the deadline is midnight Monday.
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LATE SUBMISSION POLICY:

You can turn in 2 assignments up to one week late with no penalty. Each chapter's homework assignment equals one assignment. Each lab report equals one assignment. Any assignment over one week late will be penalized.

WITHDRAWAL POLICY: If you are unable to complete this course and wish to receive a grade of W, you must withdraw on or before the last date for withdrawals (Wednesday, Aug. 1, 2012). Withdrawal from a course is a formal procedure, which you must initiate; neither I nor the college can do it for you. If you stop participating on-line or coming to the lab, and do not withdraw, you will receive a performance grade, usually an "F".

INTEGRITY POLICY: It is your responsibility to know and understand the student code of conduct with regard to scholastic honesty, as well as the consequences for a breach of conduct. If you cheat on an exam, you will receive an "F" for the class.

CLASS CALENDAR AND SCHEDULE:

Date		Reading Assignments from Textbook	Homework Assignments*	Lab*
6/4	Get Textbook from Bookstore; Login to D2L	1 (What is Chemistry)	Chapter 1 (1,4,5,8,12,25,28,30,31,38,42,53)	Read "Lab Rules" and sign Lab Safety Regulations
6/11		2 (Numerical Side of Chemistry)	Chapter 2 (2,9,14,17,20,26,29,32,34,37,39,40,43,108)	Exp. 1 - Observations
6/18		3 (The Evolution of Atomic Theory)	Chapter 3 (2,5,8,9,10,13,16,18,21,23,25,77,79,87)	Exp. 2 - Scientific Method
6/25	Exam 1** (Chapters 1,2,3)	4 (Modern Model of the Atom)	Chapter 4 (2,6,11,12,15,18,21,24,25,32,33,42,60,73,83)	Exp. 3 - Mixtures and Pure Substance
7/2		5 (Chemical Bonding and Nomenclature)	Chapter 5 (2,5,8,11,15,16,20,21,24,27,30,31,34,35,114,127,130,133)	Exp. 4- Gluep
7/9		8 (Chemical Reactions)	Chapter 8 (2,3,4,7,10,11,12,13,15,16,28,29,35,37)	Exp. 5 – Kinetic Molecular Theory
7/16	Exam 2 (Chapters 4,5,8)	9 (Stoichiometry and the Mole)	Chapter 9 (1,2,4,6-10, 12,16,17,18,19,20,23,26,28,30,31,34,98)	Exp. 6 - Stoichiometry
7/23		10 (Transfer of Electrons)	Chapter 10 (3,5-9,12,16,18,20,22,44,58,59)	Exp. 7 – Oxidation Reduction
7/30		12 (Solutions)	Chapter 12 (2,7,12,14,15,16,17,18,20,21,22,23,24,25,26, 27,30,31,135)	Exp. 8 – Preparation of an Element
8/6	Exam 3 (Chapters 9,10,12)		Finals must be completed by Friday, August 10, 2012.	

* Homework and lab assignments are due the following Monday. In other words, the assignments for the first week of classes are due on Monday of the second week of classes.

** You have a window of one week to take each exam. For example, for Exam 1, BC students can make an appointment at the LAC to take the exam any time from Monday, 6/25/2012 to Monday, 7/2/2012. For Virtual College students, arrangements must be made with your appropriate testing center by Wednesday, 6/20/2012, so that I can contact the official proctor by the date of the first exam. You also have a window of 7 days after the exam arrives at your testing center to complete the exam.