

Citrus College

Course Syllabus

Chem. 103 – College Chemistry

Winter 2011

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Lecture Text: General, Organic, & Biological Chemistry: Structure of Life; 3rd edition; Timberlake; 2010.

Laboratory Text: CHEM 103 laboratory Manual – Citrus College 2009

Required Material: Approved Google by Tuesday Jan. 4th.

Prerequisite: Math 130

Grading: 90%+ = A 80-89% = B 65-79% = C 50-64% = D

Lecture:

Laboratory:

Homework	10%				
Exam 1	15% (T. Jan 11 – 2:10-3:45 pm)		Lab Final	3%	
Exam 2	15% (M. Jan 24 – 2:10-3:45 pm)		Pre-Lab	7%	
Exam 3	15% (W. Feb. 2 – 2:10-3:45 pm)		Lab Report	20%	
Final Exam	15% (Th. Feb 10 – 2:10-3:45 pm)				

Homework: Will be assigned each class period and will be due by the end of the day (8:15 pm). You must show work to get full credit. Homework will be assigned from the text and ChemNet. No late homework is accepted.

Exams: Closed books & notes. A periodic table will be provided to you. You need calculator (your own or borrow from stockroom). No makeup exam. Final exam is comprehensive.

Pre-Lab: A write-up of the experiment is due @ the start of the class. Pre-Labs must be typed. No late pre lab is accepted.

Format of the pre-lab: The following order must be followed to get full credit.

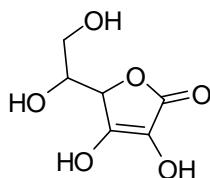
1. Name, Lab period, Date.
2. Experiment title.
3. Goals.
4. Experimental Procedure: A detailed description of the experiment in you own words.
5. Figures – label all parts.

Lab Report: No report is accepted without performing the experiment. No make up lab! All parts of the experiment must be done individually! Following lab safety rules, punctuality, organization, and neatness in the lab is graded as part of the lab report.

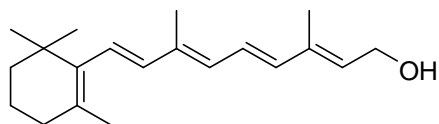
Format of the lab report: remove & staple “report sheets” which include pre-lab study questions, data sheets, calculations, questions, and problems.

Important Information:

1. Two days of absences from the class will result in the drop from the course.
2. Various handouts, homework assignments, course schedule changes, chapter in the exam,...are noted in the class. It is your responsibility to be aware of the events.
3. No late work is accepted.
4. There is no make-up work!
5. No work is dropped.
6. Last day to withdraw from the course is Monday, January 24th. Failure to show up to the class after this date will result in a grade of “F” for the course.
7. All work submitted with your name is assumed to be original (done by you only). Any deviation will be dealt according the “Citrus Community College Standards of Student Conduct Policy”.



Vitamin C



Vitamin A

Tentative Course Schedule

<u>Week</u>	<u>Date</u>	<u>Topics</u>
1	M. Jan 3	Ch. 1: Measurements – units, scientific notation, sig. fig.
	T. Jan 4	Ch. 1: conversion factors, density
	W. Jan 5	Ch. 2: Energy & Matter – temperature, specific heat
	Th. Jan 6	Ch. 2: energy & nutrition, classification of matter
	Laboratory	Safety in the lab, Check-in (M) Lab 2: Density (T) Write-up of Lab 2 (W) Lab 9: Energy & Specific Heat (Th)
2	M. Jan 10	Ch. 2: states & properties of matter, changes of state
	T. Jan 11 (Exam 1)	Ch. 3: Atoms & Elements – symbols periodic table
	W. Jan 12	Ch. 3: atomic number, mass number, isotopes
	Th. Jan 13	Ch. 3: electron energy level & configuration, periodic trends
	Laboratory	Lab 10: Energy and State of Matter (M) Write-up of lab 10 (T) Lab 3: Atomic Structure (W) Lab 4: Electron Configuration & Periodic Properties (Th)
3	M. Jan 17	Holiday – MLK Day – No School
	T. Jan 18	Ch. 5: Compounds & Their Bonds – Octet rule & ions, naming
	W. Jan 19	Ch. 5: ionic & covalent compounds, shapes & polarity
	Th. Jan 20	Ch. 6: Chemical Reactions & Quantities – types of reactions
	Laboratory	Lab 5: Compounds & Their Formulas (T) Write-up of lab 5 (W) Lab 6: Chemical Reactions & Equations (Th)
4	M. Jan 24 (Exam 2)	Ch. 6: mole, molar mass, mole relations in chemical reactions
	T. Jan 25	Ch. 6: percent yield and limiting reactants, energy change
	W. Jan 26	Ch. 7: Gases – properties of gases, combined gas law
	Th. Jan 27	Ch. 7: ideal gas law, partial pressure stoichiometry
	Laboratory	Lab 8: Inorganic Synthesis: Alum from Scrap Aluminum (M) Write-up of lab 8 (T) Lab 11: The Reaction of Mg with Hydrochloric acid (W) Write-up of lab 11 (Th)

5	M. Jan 31 T. Feb 1 W. Feb. 2 (Exam 3) Th. Feb. 3	Ch. 8: Solutions – electrolytes & non-electrolytes, solubility Ch. 8: percent, molarity Ch. 9: Chemical Equilibrium – rates, equilibrium constant Ch. 10: Acids & Bases – strength of acids & bases
	Laboratory	Lab 12: Soluble & Insoluble Salts (M) Lab 13: Solutions, Electrolytes, & Concentration (T) Lab 14: Tests for Cations & Anions (W) Lab 15: Reaction Rates & Equilibrium (Th)
6	M. Feb 7 T. Feb 8 W. Feb. 9 Th. Feb. 10 (Final)	Ch. 10: ionization of water, reactions of acids and bases, salts Ch. 10: Buffers Chapter 4: Nuclear Chemistry – radioactivity, nuclear rxn, $1/2$ life Chapters 1-10
	Laboratory	lab 16: Acid-Base Titration (M) Write-up of Lab 16 (T) Lab Final (W) Check-out (Th)



You Must Wear Goggles @ All Times in the Lab !