



CURRICULUM GUIDELINES

A. Division: Instructional Date: November 6, 2001
B. Department / Science and Technology New Course Revision
 Program Area
 If Revision, Section(s) M, N, P
 Revised
 Date Last Revised: November 18, 1998
C: CHEM 108 **D:** Introductory Chemistry **E:** 4

Subject & Course No.	Descriptive Title	Semester Credits
F: Calendar Description: This course quickly reviews the content of CHEM 104, including stoichiometry and atomic structure, and then continues with the study of the following topics: thermochemistry, equilibrium, gases and liquids, acids and bases, redox reactions and electrochemistry, and several examples of descriptive chemistry		
G: Allocation of Contact Hours to Type of Instruction / Learning Settings Primary Methods of Instructional Delivery and/or Learning Settings: Lecture and Laboratory Number of Contact Hours: (per week / semester for each descriptor) Lecture: 4 hours Laboratory: 2 hours Number of Weeks per Semester: 14	H: Course Prerequisites: CHEM 104 (C or better) or CHEM 11 (C or better) AND MATH 101 or equivalent.	
	I: Course Corequisites: None	
	J: Course for which this Course is a Prerequisite CHEM 110	
	K: Maximum Class Size: 36	
L: PLEASE INDICATE: <input type="checkbox"/> Non-Credit <input type="checkbox"/> College Credit Non-Transfer <input checked="" type="checkbox"/> College Credit Transfer: Requested <input type="checkbox"/> Granted <input checked="" type="checkbox"/> SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)		
M: Course Objectives / Learning Outcomes The student will be able to: 1. Express the precision of a calculated quantity given the uncertainties in the measurements used in the		

calculation.

(c) **Stoichiometry Review:**

Types of reactions, calculation of percentage yield, limiting reactant problems, solutions: concentration units and stoichiometry, titrations.

2. **Principles of Reactivity: Thermochemistry**

Energy units, heat capacity, energy transfer, enthalpy, calorimetry, phase changes, Hess's Law, standard heats of formation, fuels.

3. **Chemical Equilibrium**

The equilibrium constant, interpretation of equilibrium constant values, calculations involving K, Le Chatelier's Principle, controlling chemical reactions.

4.

O: Methods of Instruction

The course will be presented using lecture, problem sessions and class discussions. In-class demonstrations of computer-based educational materials and videos will be used where appropriate. The laboratory consists of experiments performed by students, either individually or in pairs, which illustrate the lecture material, or encourage good experimental technique.

P: Textbooks and Materials to be Purchased by Students

The Chemical World: Concepts and Applications, Moore, Stanitski, Wood, and Kotz, 2nd Edition, Harcourt Brace and Company, 1998.

Chemistry 108 Laboratory Manual, Douglas College

Q: Means of Assessment

The student's performance in the course will be based on the following evaluations:

1. Lecture Material (75%)

- (a) Two or three in-class tests will be given during the semester (30%).

