

Introductory Chemistry and Laboratory

Chemistry 111

Section: D100

Term: 1999 Spring

Instructor: Lecture: Dr. S. Lower. Office: C-9016C. E-mail: lower@sfu.ca

Chem 110/111 website. <http://www.sfu.ca/chem110>.

Laboratory: Dr. D. Sharma. Office: C-7022.

Discussion Topics: General Course Description:

General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, the periodic table, the chemical bond; the properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium.

3 lecture hours/week; 1 hour/week tutorial; 4 lab hours in alternate weeks.

Topics:(number of lectures in brackets)

First midterm period: Chemistry, natural science and pseudoscience(1), properties of matter, density and buoyancy(2); units, measurements, significant figures(1); atoms and the nucleus(2); atomic structure and the periodic table(3); chemical bonding(4).

Second midterm period: Nomenclature(1); atomic weights and the mole(2), solutions, concentrations and molarity(2); stoichiometry(2); properties of gases(2).

Acids and bases(3); oxidation and reduction(2); chemical reactions and equilibrium(4).

Laboratory Experiments:(alternate weeks)

Lab 1: Physical properties and Physical change

Lab 2: Chemical properties and Chemical change

Lab 3: Stoichiometry and Limiting reagent

Lab 4: Gas Laws

Lab 5: Acids and Bases

Lab 6: Oxidation-Reduction

Grading: 2 Mid-Term Exams 30%; Final Exam 40%; Assignments 10%; Lab 20%

Required Texts: Stoker, "Introduction to Chemical Principles", 5th Ed. 1996, Prentice Hall.

Introductory Chemistry and Laboratory

A Lab Manual will be distributed at the first laboratory lecture.

Recommended Texts: None

Materials/Supplies: None

Prerequisite/Corequisite: Prerequisite: B.C. High School Math 12(or equivalent)(or MATH 100, corequisite) or permission of the department. No previous training in chemistry is required for this course. Students with credit for high school Chem 12(or equivalent) or any university

Notes: Note: Students who have successfully completed B.C. High School Chem 12(or equivalent) normally start with CHEM 121.

This outline is derived from a course outline repository database that was maintained by SFU Student Services and the University's IT Services Department. The database was retired in 2014 and the data migrated to SFU Archives in 2015.