

CHEM 112 – GENERAL CHEMISTRY II (3 credits)

Description

The contents are the fundamental principles of chemistry for science majors. Basic concepts of matter, stoichiometry, reactions rate, chemical equilibrium, and electrochemistry are introduced.

Textbook

L.Masterton and C.N.Hurley, Chemistry: Principles and Reactions, 5th ed., Harcourt, 2001.

Reference

Library collection of books dealing with chemistry.

Goals

To study the fundamentals of chemistry.

Topics and corresponding chapters:	Problem Assignment
Liquids and solids Chapter 9, excluding 9.3	1,16,19,24,26,33, and 40
Solutions Chapter 10, all sections	11,17,18,20,21,25,35,37,44, and 65

First hour exam on chapters 9 and 10

Rate of reaction Chapter 11, all sections	3,19,21,22,24,30,36,44,47,49, and 59
Gaseous chemical equilibrium Chapter 12, all sections	5,7,20,24,27,36,41, 44 and 56

Second hour exam on chapters 11 and 12

Acid and bases Chapter 13, all sections	8,9,26,39,42,50,53, and 56
Equilibria in acid-base solutions Chapter 14, all sections	2,6,18,25, and 39
Precipitation equilibria Chapter 16, excluding sections 16.2 and 16.3	10,11, and 18

Third hour exam on chapters 13, 14 and 16

Spontaneity of reactions Chapter 17, excluding section 17.7	2,5,10,14,16, and 17
Electrochemistry Chapter 18, excluding sections 18.5 and 18.6	2,12,14,16,44, and 49

Four hour exam on chapters 17 and 18

Evaluation

Attendance will be mandatory and class participation will be encouraged. A number of absences higher than 2 without justification, will contribute negatively to the final grade in a 10%.

The recommended homework presented by the student will be taken into account as positive if it is handed in at time. This work will be graded. Students must take all the tests, midterm and final exams.

The percentage of each part of the course to the final grade will be:

- 1st test and midterm exams 40%
- 3rd test and final exam 40%
- Problem sets 10%
- Attitude and attendance ±10%