

University of Macau
Faculty of Science and Technology
Civil Engineering Programme
Course Outline

(4.0,3,3)

Chem 101: Chemistry
Second Semester 2003-2004

Course Description

This one-semester course is for first year students of Civil Engineering. Its contents are comparable to Chemistry courses offered in Portuguese universities. It deals with atoms and molecules, periodic table, electronic structure, chemical bondings, chemical reactions, electrochemistry and organic chemistry.

Lecturers: Prof. Chan Shek-Kiu	Room: N417	Ext.: 4467
Mr. Weng Fai Ip	Room: N425	Ext.: 4475

Lectures: Tuesday 14:00-16:00 at N204 and
Wednesday 11:00-12:00, at N203;

Laboratory: Wednesday 14:00-17:00, at W102

Syllabus: - Atoms, Atomic Structure;	Chapter: 2, 3, 4 & 7
- Valency;	8, 10 & 20.1-2
- Periodic Classification of Elements;	8
- Chemical Bonding: Ionic Bond; Silicates and Glass;	9, 10 & 12.1-5
Metallic Bonds; Bond Dissociation;	
Theory of Molecular Orbitals;	
Intermolecular Forces;	
State of Aggregation of Materials;	
- Electrochemistry: Electrolysis; Galvanizing; Corrosion;	19
- Organic Chemistry & Polymers.	11

Text: General Chemistry, The Essential Concepts, 3rd Edition, by Raymond Chang,
McGraw Hill, 2003

Assessment: Laboratory	30%
Mid-term Exam	20%
Final Exam	50%