UCL Université catholique de Louvain

LINGE1115

2015-2016

Chemistry (Part 1)

5.0 credits	50.0 h + 10.0 h	1q

Teacher(s) :	Filinchuk Yaroslav ; Leyssens Tom ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The course aims to teach students the fundamentals of Inorganic Chemistry so that they can understand the specialized language used, the states of matter, the relationship between nature, structure and the properties of inorganic compounds, chemical balances in the aqueous phase (acid-base reactions, oxide-reduction reactions and precipitation reactions) and to show how they are linked to thermodynamics and chemical reaction kinetics.
Aims :	The general objectives of this Chemistry course are to teach students the basic concepts of Chemistry and thus enable them to master the specialized language, understand the organisation of matter and the chemical transformations it can undergo and acquire an understanding of concepts applied in fields such as Metallurgy and Electrochemistry. *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Content :	CONTENTS 1. Origins and symbols of the elements Writing and understanding chemical equations and assessing reactions 2. Atomic Make-up Electron configuration of the elements Relation between electron structure and properties 3. types of connections (intra - and intermolecular) and their influence on properties 4. States of matter and changes of state 5. Chemical balances and reactions: - base-acid - oxide-reduction - precipitation 6. Elements of thermodynamics and kinetics in relation to chemical balances 7. Potential illustrations: - metallurgy of iron, of copper - batteries METHOD - Lectures with some exercises; a move towards a more active involvement on the part of the students, for example by approaching the subject through exercises or problems, would be envisaged if the Administration and Management Institute could provide more staff to supervise group work.
Other infos :	Support : syllabus available at DUC A reference boo is advised but not compulsory: P. Atkins, L. Jones, Chimie molécules, matière, métamorphoses, De Boek Université
Faculty or entity in charge:	ESPO

Programmes / formations proposant cette unité d'enseignement (UE)

Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Bachelor in Engineering : Architecture	ARCH1BA	5	-	
Bachelor in Business Engineering	INGE1BA	5	-	
Master [120] in Environmental Science and Management	ENVI2M	5	-	
Master [60] in Environmental Science and Management	ENVI2M1	5	-	