UCLouvain

wmd1105

2025

Chimie générale et minérale

9.00 credits	60.0 h + 30.0 h	Q1

Teacher(s)	Riant Olivier ;Vlad Alexandru ;
Language :	French
Place of the course	Bruxelles Woluwe
Main themes	The formation is oriented towards problems solving. Formal lessons are given and activities in small groups are organized where numerical chemistry problems are worked out. The topics covered are atomic, ionic and molecular properties, conservation of matter, gas properties, reactivity, thermodynamics, equilibria in aqueous solution and kinetics.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 The aim of the course is to give a basic knowledge of general chemistry to students oriented towards life sciences. With these lessons, the students should acquire a sound idea of what atoms and molecules are and how they behave. They should be able to use in a proper fashion the basic notions of molecular structure, reactivity, thermodynamics and kinetics. At the end of half an academic year, typical numerical problems of a first year college chemistry course have to be mastered.
Evaluation methods	Written exam involving solving problems but also including theoretical aspects of the course taught during the formal lectures and "travaux dirigés" (10 to 12 questions set by the teachers). The final mark is the arithmetic mean of all the points for the questions set in the exam. A final mark between 9/20 et 10/20 is not automatically rounded up to 10/20. There are no negative points or ponderation according to the questions and course content. However, when a student has a mark between 9/20 et 10/20 after correction, the lecturers re-examine all the marks to decide if the mark should be rounded up or down. The evaluation covers the content of the whole course.
Teaching methods	Teaching is by formal lectures. There are a series of practicals (TP) and demonstrations (TD) that accompany the teaching of this course. The teaching will be conducted face-to-face or at distance exclusively or partially according to health restrictions.
Content	This course of general and inorganic chemistry forms part of the curriculum for first year pharmacy (FARM) and biomedical science (SBIM) students. Content: 1. Introduction 2. Atoms : description and properties 3. Chemical bonding : ionic, covalent and metallic (nature, stability) 4. Chemical thermodynamics 5. States of matter 6. Chemical equilibria 7. Acids and bases 8. Solubility 9. Electrochemistry 10. Chemical kinetics
Inline resources	There is no formal syllabus ! PDF versions of slides presented in the course, which cover the subject in a comprehensive way, will be made available on MoodleUCL (https://moodleucl.uclouvain.be/). In addition, a tablet will be used to explain certain aspects of the course. The "Tablet" PDF versions of the PowerPoint files will also be made available to students via MoodleUCL.
Bibliography	Livres de référence : · Atkins, Jones, Principes de Chimie (de boek, 2ème/3ème édition) · Chimie des Solutions, Kotz, Treichel Jr, de boek/Beauchemin · Ayadim, Habib-Jiwan, Chimie Générale Edition : UCL press Universitaires de Louvain-DUC- 2013. · Voir aussi www.deboek.com et www.lachimie.org (site très utile pour travailler son cours).
Other infos	The participation in the series of demonstrations (TD) and exercises is indispensable and strongly recommended. Participation in the practicals (TP) is obligatory and unjustified absences could lead to a penalty (0/20 for the exam). "En cas d'absences répétées même justifiées, l'enseignant peut proposer au jury de s'opposer à l'inscription à l'examen relatif à l'UE en respect de l'article 72 du RGEE*"

Faculty or entity in charge	FASB

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Biomedicine	SBIM1BA	9		🔍
Bachelor in Pharmacy	FARM1BA	9		🔍