UCLouvain

lchm1111b

2026

General chemistry

8.00 credits	45.0 h + 45.0 h	Q1

Language :	French
Place of the course	Louvain-la-Neuve
Main themes	The course will familiarize with scientific reasoning, the chemical and physico-chemical phenomena and the rules that they depend on. It will deal with : 1. The classical atomic theory, leading to understanding the constitution, organisation and properties of atoms 2. Mass relationship in chemical reactions and the concept of limiting reagents 3. The description of chemical bonding and the geometry of molecules, 4. The study of the main classes of chemical reactions, 5. An introduction to physical chemistry and its thermodynamic and kinetic aspects, with particular emphasis on chemical equilibrium. The course will cover in detail the acid-base reactions (including pH calculations, acid base titrations and buffer solutions), the reactions of precipitation and complexation, as well as oxido-reduction reactions (including the applications in batteries and electrolysis). Selected illustrations of these concepts will also provide a general overview of mineral chemistry in relation with its main industrial uses and daily life.
Learning outcomes	
Teaching methods	
Inline resources	Moodleucl
Bibliography	• Livre de P. Atkins, Laverman et Jones : "Principe de chimie", Trad. Française de A. Pousse (De Boeck SUPERIEUR), ou édition anglaise originale correspondante. Manuel de travaux pratiques. Fascicule d'exercices.
Faculty or entity in charge	CHIM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Minor in Scientific Culture	MINCULTS	8		🔍
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	8		🔍
Bachelor in Biology	BIOL1BA	8		🔍