

5 credits

45.0 h + 19.0 h

Q1

Teacher(s)	Leysens Tom ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Main themes	Phenomenological aspects of thermodynamics : structure of matter, first and second law of thermodynamics, changes of state : pure materials, phase diagrams, chemical reaction, thermochemical models. Phenomenological aspects of chemical kinetics : rate constant and reaction orders, simple and complex kinetics, reaction and diffusion, surface processes. Microscopic aspects of thermodynamics and kinetic theory : statistical thermodynamics : complexions, distributions, partition function, derivation of thermodynamic functions, kinetic theories : transition state theory, potential surfaces and collision dynamics. Exercises : they aim to concretize and put into practice the thermodynamic and chemical kinetics concepts. The use of microcomputers is an important element to solve the problems of a normal complexity.
Aims	<p>1 The objective of the course is to guide students in acquiring basic knowledge in physical chemistry and to apply it to diverse concrete cases. A systematic presentation of the thermodynamic bases (classical and statistical) as well as chemical kinetics, indispensable to the general formation of a chemist or biochemist is provided.</p> <p>-----</p> <p><i>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".</i></p>
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Chemistry	CHIM1BA	5	LCHM1111 AND LCHM1211 AND LCHM1252	