

3.0 credits

30.0 h

2q

Teacher(s) :	Leysens Tom ; Peeters Daniel ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>Phenomenological aspects of thermodynamics : structure of matter, first and second law of thermodynamics, changes of state : pure materials, phase diagrams, chemical reaction, thermochemical models.</p> <p>Phenomenological aspects of chemical kinetics : rate constant and reaction orders, simple and complex kinetics, reaction and diffusion, surface processes.</p> <p>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.</p> <p>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.</p>
Aims :	<p>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><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>
Cycle and year of study :	> Master [120] in Chemistry and Bio-industries
Faculty or entity in charge:	CHIM