


5 credits

45.0 h + 10.0 h

Q1

Teacher(s)	Leyssens Tom ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	A detailed study of the properties of matter and molecules is presented and completed by a discussion of chemical reactivity models. Teachers will place emphasis on microscopic versus macroscopic properties connecting both approaches through a statistical point of view.
Aims	<p>1 The course aims to guide students in completing their knowledge in physical chemistry and to apply it to concrete cases. A systematic presentation completes the education of chemical thermodynamics and kinetics acquired during the bachelor's degree.</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>
Evaluation methods	A written exam takes place in January. During the exam, the student is able to reproduce the theory that is considered during the course, as well as to apply the course material to solve practical problems. The exam will cover all the chapters that are considered in the course.
Teaching methods	This course is a 5 Credit course consisting of 45h of classes given during the first term. Slides or available on Moodle. Further information and books can be acquired from T. Leyssens.
Content	The goal of this class is to take up where LCHM1351 left of. The class has two major topics. In a first part, chemical kinetics are taken to the next level, focusing on the basic concepts behind chemical kinetics. In a next, part of the course we focus on applying all concepts of LCHM1351 and LCHM1352 to a more specific field focusing on crystal engineering, crystal growth and crystallization. There is also a slight intermezzo discussing intermolecular interactions.
Inline resources	slides available on moodle
Other infos	<ul style="list-style-type: none"> • CHAPI : Models explaining chemical kinetics • CHAPII: Kinetics of Complex reactions • CHAPIII: Homogeneous catalysis and kinetics • CHAPIV: Transport Phenomena • CHAPI : Introduction • CHAPII: Crystallization basic principles • CHAPIII: Crystallization kinetics • CHAPIV: Polymorphism • CHAPV: Chirality and crystallization • CHAPVI: Solvates and Hydrates • CHAPVII: Salts and Cocrystals
Faculty or entity in charge	CHIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Chemistry	CHIM2M	5		
Master [60] in Chemistry	CHIM2M1	5		