

6 credits

45.0 h + 22.5 h

Q2

Teacher(s)	Hautier Geoffroy ;
Language :	French
Place of the course	Louvain-la-Neuve
Aims	<p>1 The course, intended for chemistry students, gives an introduction to the microscopic aspects of the atomic and molecular world. It introduces concepts such as the electronic structure of atoms and molecules, the geometrical structure of molecules as well as the molecular movements, with the idea of relating these concepts to molecular properties and chemical reactivity. Special attention will be given to the discrete character of energy levels, to their significance, to the way they are calculated as well as to the description of individual molecules. The course serves as an introduction to molecular spectroscopy, to statistical thermodynamics and to quantum chemistry. It introduces terminology and concepts needed in organic and inorganic chemistry.</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>
Other infos	<p>Exercises focus on the molecular aspects, more particularly on rotational and vibrational movements, molecular mechanics, description of simple chemical components, pi systems and frontier orbitals. They are aiming to illustrate the different theoretical concepts and put them into practice. The use of current software allowing molecular representation is required. A tight coordination with the course of crystallography and molecular spectroscopy is necessary.</p>
Faculty or entity in charge	CHIM

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Chemistry	CHIM1BA	6		