UCL Université catholique de Louvain

LCHM1251

2010-2011

Elements of crystallography and molecular spectroscopy

8.0 credits	60.0 h + 30.0 h

Teacher(s) :	Hermans Sophie ; Declercq Jean-Paul ; Habib Jiwan Jean-Louis ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	First part - Crystallography : The systematic study of the symmetry of finite and infinite objects. Molecular symmetry and representation. Point groups and space groups. Application to crystal state ; notions of systems and lattices. Introduction to X-ray diffraction by crystals and determination of crystal and molecular structures. 2nd part - Molecular spectroscopy : Initiation to molecular spectroscopy and presentation of most current spectroscopies such as infrared, RMN, electronic absorption, Raman, etc. The course includes an introduction to mass spectroscopy.
Aims :	1st part - Crystallography : Understanding symmetry and in particular molecular symmetry. Comprehension of modern crystallographic analysis methods and the results they allow to achieve. 2nd part - Molecular spectroscopy : Acquisition of general principles of molecular spectroscopy. Mastering the bases of the most current of spectroscopies. *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".*
Cycle and year of study :	> Master [60] in Biology > Master [120] in Biochemistry and Molecular and Cell Biology
Faculty or entity in charge:	CHIM