



3.00 credits

22.5 h + 7.5 h

Q1

Teacher(s)	Singleton Michael ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Main themes	<ol style="list-style-type: none"> 1. Principles and calculations of NMR spectra; 2. 1D NMR pulse sequences (SEFT, APT, INEPT, DEPT); 3. 2D NMR : <ol style="list-style-type: none"> a) through bond homonuclear (COSY) and heteronuclear correlations; b) through space correlations (NOE, NOESY, ROESY); 4. ¹H & ¹³C NMR spectroscopy; 5. NMR spectroscopy of other nuclei (¹⁹F, ¹⁵N, ³¹P); 6. Solid state NMR spectroscopy.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ol style="list-style-type: none"> 1 This course aims at enlarging and deepening the basic notions in NMR so that students should be able to collect and interpret spectra of various complexities.
Content	<ol style="list-style-type: none"> 1. Introduction and generalities; 2. NMR spectroscopy practical aspects; 3. 1D NMR experiments; 4. 2D NMR experiments: through bond homonuclear and heteronuclear correlations, and through space correlations; 5. Solid state NMR; 6. Theoretical aspects and applications will be connected with practical questions related to the use of a NMR spectrometer and data acquisition.
Other infos	<p>Background : Basic notions in molecular spectroscopy (CHM1251B). Evaluation: written and oral exams. Documents: complicated schemes (syllabus) may be given along with some textbook references; The course could be partly or totally delivered by an invited lecturer. Other</p>
Faculty or entity in charge	CHIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Chemistry	CHIM2M	3		
Master [60] in Chemistry	CHIM2M1	3		
Master [120] of Education, Section 4 : chemistry	CHIM2M4	3		