LINGE1223

2016-2017

Chemistry

3.0 credits	20.0 h + 10.0 h	2q

Teacher(s) :	Gohy Jean-François ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The course aims to teach students the fundamentals of Organic Chemistry so that they can understand the specialized language used, the relationship between nature, structure and the properties of organic compounds and the basics of chemical reactivity.
Aims :	The general objectives of this Chemistry course are to teach students the basic concepts of Chemistry and thus enable them to master the specialized language, understand the organization of matter and the chemical transformations it can undergo and acquire an understanding of the concepts which can lead to areas of application such as polymers and living systems. *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".*
Content :	CONTENTS 1. Review of chemical bonds 2. Notions of function, functional groups and functionality 3. Notions of isomers including notions of stereoisomers (conformations, cis/trans and optics) 4. electron movement inside molecules 1. inductive effects (permanent polarisation) and polarizability (induced polarisation) 2. mesomeric effects relation with some properties (acid/basic character) 5. reactivity using examples in the field of small molecules and macromolecular synthesis, chosen among the following reactions: 3. nucleophilic substitution on aliphatic carbon 4. electrophilic addition on double bonds 5. substitution (elimination - addition) on the carbonyl function 6. electrophilic aromatic substitution METHOD - Lectures with some exercises; a move towards a more active involvement on the part of the students, for example by approaching the subject through exercises or problems, would be envisaged if the Administration and Management Institute could provide more staff to supervise group work. - Lab work directly related to the subject matter; this is essential to show the experimental nature of Chemistry
Faculty or entity in charge:	ESPO

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Bachelor in Business Engineering	INGE1BA	3	-	
Master [120] in Environmental Science and Management	ENVI2M	3	-	
Master [60] in Environmental Science and Management	ENVI2M1	3	-	