UCL Université catholique de Louvain

LPHY2126

2015-2016

Cosmology

5.0 credits	22.5 h + 7.5 h	2q

Teacher(s) :	Ringeval Christophe ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Main themes :	The observed universe - Cosmological principle and kinematics - Dynamics of Friedmann-LemaÃ®tre space-time * Cosmological parameters and dark energy - Thermal history of the universe * Kinetic theory in curved space-time * Freeze-out of interactions and relics - Big-Bang-Nucleosynthesis * Abundance of light elements * Dark matter
Aims :	These lectures will introduce the students to the cosmological observations and theoretical models at the root of modern physical cosmology. In particular, we will show how the expansion of the universe and the relative abundances of the light nuclei can be predicted from the laws of Physics. While the agreements between these predictions and their actual measurements have validated the Big-Bang model of Friedmann and LemaÃ®tre, they now suggest the existence of new forms of matter and energy, referred to as "dark". *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".*
Faculty or entity in charge:	PHYS

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Physics	PHYS2M	5	-	