UCL Université catholique de Louvain

LPHY2234

2015-2016

Neutrino Physics and Astroparticles

5.0 credits	30.0 h	2q

Teacher(s) :	Bruno Giacomo ; Lemaitre Vincent ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Main themes :	Neutrino basics Neutrino mass: Standard Model and extensions Neutrino oscillations in vacuum and in matter Solar neutrinos: experiments Atmospheric neutrinos: experiments Neutrinos at nuclear reactors and at accelerators Cosmic gamma ray detection Cosmic X ray detection High energy cosmic ray detection Gravitational waves detection
Aims :	Give the students the theoretical and experimental bases of neutrino physics and astrophysics. *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".*
Other infos :	Students must have followed and passed at least the following exams: PHY2372 " Experimental methods and data processing " and PHY2131 "Elementary Particle Physics I" Evaluation is based on the outcome of a final exam consisting in the discussion of one or more reports written by the student on specific subjects touched during the course. Slides as well as additional documentation are made available to the students.
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	-	🔍