UCL Université catholique de Louvain

LPHY2135

2016-2017

Computing and numerical methods in particle physics

4.0 credits	15.0 h + 22.5 h	2q

Teacher(s) :	Delaere Christophe ; Bruno Giacomo ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Main themes :	- Real time event selection (Hardware and software triggering systems) - Event reconstruction methods: Tracking, vertexing, clustering and particle identification. Calibration and alignement techniques. - Data analysis methods. - Particle interaction MonteCarlo generators. - Simulation of particle propagation in matter. Computing laboratory sessions where projects related to the field under study will be carried out.
Aims :	Allow the students to understand and use the main data processing techniques used in modern Particle Physics experiments. *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 :	It is advised (but not necessary) to follow one or more among the following courses: PHY2372 " Experimental Methods ", PHY2131 " Elementary particle Physics I " and PHY2236 " Detectors, nuclear electronics and measurements of ionizing radiation".
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	4	-	