

5.00 credits

25.0 h + 5.0 h

Q1

Teacher(s)	Bruno Giacomo ;Cortina Gil Eduardo ;de Wasseige Gwenhaël ;Lemaitre Vincent ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	LPHYS2131
Main themes	Principles and applications of particle acceleration - Accelerator physics - Neutrino physics - Precision measurements at low energies
Learning outcomes	
Evaluation methods	Evaluation of personal projects reports. Oral exam, partly based on the projects reports.
Teaching methods	Lectures in class. Personal projects. Students can choose the subject among a list proposed by the teachers. Reading portfolio for personal study.
Content	PARTIM A (5 credits; can be taken separately): Principles of particle acceleration. Underlying physics and experiment description for the following subjects : Higgs boson, top quark and beyond-the-Standard Model physics (LHC collider) - Flavour physics (experiments at B-factories and NA62) - Neutrino physics - Precision measurements at low energies (e.g. muon g-2, electron EDM,...) PARTIM B (5 credits; can be taken separately): Theory, instrumentation and data analysis methods used in astroparticle physics and gravitational wave physics.
Bibliography	Des diapositives de cours et des documents supplémentaires sur les sujets traités sont disponibles sur le site MoodleUCL de l'unité d'enseignement. Course slides and additional documents on the subjects addressed are available on the MoodleUCL website of the teaching unit.
Other infos	Following the sanitary conditions, the modalities of the teaching AND the examination could be reassessed according to the situation and the rules in force.
Faculty or entity in charge	PHYS

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Physics	PHYS2M	5		