

Astroparticle and gravitational wave physics - Gravitational wave physics and Advanced data analysis method in astrophysics

5.00 credits

27.0 h + 3.0 h

Q1

Teacher(s)	Bruno Giacomo ;de Wasseige Gwenhaël ;Janquart Justin ;Lemaitre Vincent ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	go to LPHYS2336
Main themes	go to LPHYS2336
Learning outcomes	At the end of this learning unit, the student is able to : go to LPHYS2336
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	This course consists of 2 partims, each worth 2.5 credits, thus totalling 5 credits: "Gravitational-wave Physics", and "Data Analysis methods in Astrophysics". PARTIM "Gravitational-wave Physics" (2.5 credits): theory and detection methods in gravitational-wave physics.PARTIM "Data analysis methods in Astrophysics" (2.5 credits): data analysis techniques used in observational astrophysics. They include both classical statistical data analysis and machine learning- based techniques.
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.
Faculty or entity in charge	PHYS

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [60] in Physics	PHYS2M1	5		
Master [120] in Physics	PHYS2M	5		