UCLouvain

lbir1221

2023

Wave, optical and modern physics

5.00 credits	30.0 h + 30.0 h	Q2

Teacher(s)	Bertrand Bruno (coordinator) ;Charlier Jean-Christophe ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Learning outcomes	
Content	**Part 1: Mechanical waves** 1. Aspects of mechanical waves 2. The particular case of sound waves **Part 2: Geometrical optics and physical optics** 1. Geometrical optics, reflection and refraction 2. Geometrical optics, Lenses and optical instruments 3. Electromagnetic waves 4. Physical optics, polarization and 1D interferometry 5. Physical optics, Diffraction and interference grating **Part 3: Modern Physics** 1. Introduction to special relativity 2. Introduction to quantum physics 3. Nuclear physics, notions of radioactivity
Bibliography	Physique - Volume 3 : Ondes, optique et physique moderne, Harris Benson, Editions de Boeck
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Bioengineering	BIR1BA	5	LBIR1110 AND LBIR1121 AND LBIR1122	