

5 credits

30.0 h + 30.0 h

Q2

Teacher(s)	Bertrand Bruno ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	The first aim is to discover the beauty of the coherent explanation of the variety of electromagnetic manifestations through the Maxwell equations. The demonstration of the electromagnetic nature of light will follow. Modern Physics completes this unification with the special theory of relativity where energy and time is grouped in one four-dimension world, where energy and masse are equal. It follows in a common vision of the quantification of matter and light and of the four fundamental interactions interpreted through a propagator concept for each of them. Nuclear physics resumes the lectures describing the chart of nuclei, the decays, the energy balance in fission and fusion processes, and the numerous applications. This unified view of the physics world should sharpen the student curiosity and improve their skills and critics for the following years, in their study as well as in their professional carrier.
Aims	<i>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".</i>
Bibliography	<b>Manuels :</b> - Physique - Volume 2 - Électricité et magnétisme <a href="#">Harris Benson</a> , Editions de Boeck - Physique - Volume 3 ' Ondes, optique et physique moderne, <a href="#">Harris Benson</a> , Editions de Boeck <b>Diapositives support de cours</b> <b>Syllabus d'exercices et de laboratoires</b>
Faculty or entity in charge	AGRO

**Programmes containing this learning unit (UE)**

Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Bioengineering	<a href="#">BIR1BA</a>	5		