

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

4 credits

30.0 h + 15.0 h

Q2

Teacher(s)	G�rard Jean-Marc ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Depending on the audience's interests, the course introduces to some of the important ideas of physics, to be chosen from among Newton's mechanics, Maxwell's electromagnetism, Einstein's theories of special and general relativity, quantum physics, the physics of condensed matter or the theories of the elementary particles. It concludes with some of the challenges left unanswered by modern physics. No detailed mathematical formulation is developed. Rather, emphasis is put throughout on a discussion of the basic concepts and their actual significance. Applications of these fundamental sciences to advanced modern technologies are also highlighted.
Aims	<p>The fundamental natural sciences, and especially physics, are as much part of the common cultural heritage of humankind as are the arts and the humanities understood in the broadest terms. Indeed, within its specific methodology physics itself attempts to grasp the basic meaning of the Universe and Man's place within it. From the perspective of an exposure to the general culture of science offered to students in the humanities, with only little use of the mathematical language the course discusses the basic and essential significance of the concepts underlying the "revolutions" of physics having led to modern physics. Some common advanced technologies stemming from these advances are also described. The course closes with some of the open challenges of which the possible resolutions will define the physics of the XXIst century.</p> <p>-----</p> <p><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></p>
Evaluation methods	<b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b> The student will submit a personal work to present during the oral examination.
Teaching methods	<b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b> This course will be fully presented on a blackboard. Notes are under construction but references such as <ul style="list-style-type: none"> <li>• <i>La nature de la physique</i> (R. Feynman)</li> <li>• <i>Sept br�ves le�ons de physique</i> (C. Rovelli)</li> </ul> will be given according to the themes addressed.
Other infos	Prerequisites: Basic physics and mathematics concepts at the high school level.
Faculty or entity in charge	PHYS

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Aims
Minor in Scientific Culture	<a href="#">LCUISC100I</a>	4		