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Principles of physics for philosophers

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In recent years I have held a Physics Course for students of the Degree in Philosophy at Sapienza University. The need for this course arose from a series of Science Cafés held at Sapienza in 2007. From those meetings it appeared that the students of Philosophy, who were very capable and prepared in their field, often did not know what the historical-conceptual path of physics was from Galilei to the present day. They did not know not only the historical development of Physics from Galilei onwards, but in particular they ignored the developments in the last century regarding Special and General Relativity and Quantum Mechanics, or, if they knew, they often had a partial or distorted idea of them.

The idea was therefore to create a course aimed at students from non-scientific degree courses that would present, in a simplified but mathematically correct form, the Principles of Physics in their historical path. Discussing the Principles allows us to avoid the formal explanations necessary to treat all the themes and laws that make up the corpus of Physics. The discussion of the themes was therefore developed by deepening, in addition to a necessary formal part, the meaning that should be attributed to the Principles and the evolution in their understanding / description.

This course led to a book (1) which combines the topics covered with historical-philosophical sections written by the philosopher Paolo Pecere, from Roma Tre University. In these sections is briefly treated, for each chapter, the point of view of the philosophers at that time.

(1) Carlo Cosmelli, *Fisica per filosofi*, (Carocci, 2021)

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