

PhD course in Physics, Astrophysics, and Applied Physics - Università degli Studi di Milano
PhD cycle 40 (2024-2025)

All lectures will be given in English.

Course title	Instruments and Methods for a Cultural Understanding of Physics
Teacher in charge of the course	MARCO GILIBERTI
List of the teachers of the course <i>[surname/name; affiliation; e-mail]</i>	MARCO GILIBERTI; Univerity of Milan; marco.giliberti@unimi.it LETIZIA BONIZZONI; Univerity of Milan; letizia.bonizzoni@unimi.it LUISA LOVISETTI; Univerity of Milan; luisa.lovisetti@unimi.it
Training objectives	Providing a multidisciplinary vision, which simultaneously serves to frame physics in a cultural context that is important for today's man and, at the same time, elucidate some useful tools for the disciplinary appropriation of its contents.
Prerequisites <i>[please insert details and also state whether the course has advanced contents suitable for students with prior knowledge of the topics or is also suitable for students without prior knowledge]</i>	No particular prerequisites are needed. the course is also suitable for non-physicist graduates and its contents will be adapted according to the needs and knowledge of the students
Detailed course program	In the first module, as monographic examples, the huge cultural impact generated by the gradual and tormented birth of the three principles of dynamics, and the genesis of quantum mechanics starting from the so-called old quantum physics will be discussed. In the second module we will change the point of view of the course; we will explore the applications of physics to different cultural contexts and its role in multidisciplinary research related to the cultural heritage. We will discuss case studies to explain how physics can support the knowledge and understanding of cultural heritage. Ample space will be given to discussion and group work on the issues addressed.
Examination modalities	Oral discussion on a theme chosen by the student
Preliminary schedule <i>[please indicate the weeks when the lectures will be given]</i>	December 2024-January 2025