

PHD PROGRAMME IN PHYSICS, ASTROPHYSICS, AND APPLIED PHYSICS
UNIVERSITÀ DEGLI STUDI DI MILANO
PhD Cycle 41 (2025-2026)

All lectures will be given in English.

Course title	4D and 3D theories with four supercharges: Field theory, D-branes, holography and localisation
Teacher in charge of the course	Klemm Silke
List of the teachers of the course	Amariti Antonio, INFN, antonio.amariti@mi.infn.it
Training objectives	Knowledge and managing of modern methods in string theory with a specific interest in D-branes, their role in the holographic correspondence and the most recent applications to localization.
Prerequisites	Supersymmetry and introduction to string theory.
Detailed course program	D-branes and supersymmetric quantum field theories on D-branes, holography and supersymmetric localization techniques.
Examination modalities	Oral examination
Preliminary schedule	Starting in February 2026. Course enrolment deadline: December 27, 2025.