



## Course for Ph.D. students 40<sup>th</sup> cycle (Nov 2024 – Oct 2027)

## **Cryo-electron Microscopy of Biological Macromolecules** (4 ECTS)

Prof. Ben Luisi

University of Cambridge

Course language: English

Scheduling: Spring 2025

The exact date and time will be announced on the website in the page "Active courses" for each session.

To attend the course please contact:

Prof. Barbara Campanini (barbara.campanini@unipr.it)

## **Course description**

Cryo-electron microscopy (Cryo-EM) is a rapidly advancing structural biology technique that allows the determination of the three-dimensional structures of biological macromolecules. Cryo-EM has revolutionized the field of structural biology by providing a powerful tool for visualizing the structure of biological molecules either in their native state at near-atomic resolution (single-particle analysis, SPA) or in their natural environment (tomography). After a brief introduction to the principles and applications of cryo-EM, the course will provide a practical hands-on experience with both cryo-EM SPA and subtomogram averaging.