

Advanced instrumentation for the study of nuclear structure and reaction dynamics, PhD course
2020/2021

In this course the detectors in use for contemporary nuclear physics experiments will be explained starting from the basics of the detector manufacturing, detection processes, signal formation and performance obtainable. Different kind of detectors and configurations will be discussed in particular solid state detectors, like silicon and germanium detectors, and magnetic separators and spectrometers. Their use will be illustrated with examples of real experiments, along with a description of radioactive ion beam facilities where these experiments could be performed.

The exam will consist in a discussion of an article of interest of the students, to be chosen among a broad list of articles related to the course plus a discussion about the content of the course itself.

*This year the course will be complemented by 8h classes on state-of-the-art ab-initio calculations in nuclear physics, held by an International expert.