

The aim of this course is to equip students with a toolbox of statistical and numerical methods, which they could use to accomplish scientific goals in an efficient way. Good practices of collaborative work will be highlighted, allowing them to operate more productively in the environment of research teams. The selection of topics allows understanding more profoundly the work done by others, helping students to gain confidence in their own scientific pursuits.

The list of topics includes but is not limited to the minimisation and regularisation methods, and the propagation of uncertainties. Neural networks and Monte Carlo methods will be covered as well. C++, Python, Bash, ROOT, but also collaborative tools like Git, will be introduced and used in hands-on exercises. Working at computing farms will be addressed.

Students pass the course by completing of few minor group projects and one major personal project