**Course on quantum chemistry wave-function methods**
- Introduction to the quantum many-electron problem
- Hartree-Fock (HF) method
- Overview of post-HF methods for electron correlation
- Configuration interaction
- Perturbation theory
- Coupled cluster theory

**Course on quantum chemistry Density Functional method**
The course is aimed to give a general overview of the Density Functional Theory (aka DFT), starting from early developments and ending to some of the most recent developments. Together with the theorems giving a rigorous theoretical framework, some examples will be discussed in order to illustrate the advantages and limitations of DFT approaches in Chemistry.

**Practical work**
Concerning practical exercises, a series of hands-on problems with the accompanying theory will be proposed.
This part will be subdivided in four largely independent sub-sections:
- Introduction to basic quantum chemical computations using Gaussian on a Linux terminal.
- Advanced techniques for the optimisation and characterisation of Transition States
- Introduction to multiconfigurational methods: Symmetry, electronic transitions and spectra.