



Soil Microbiology

The aim of the course is to provide students with basic knowledge and principles on soil microorganisms. The course includes an Introduction to Soil Microbiology and describes the historical context in which this scientific field has evolved. The course provides basic knowledge about the soil and rhizosphere microbiome, the taxonomic and metabolic diversity of soil microorganisms, their role in biogeochemical cycles and their interactions with other organisms, e.g. plants, microorganisms, etc. Successful completion of the course will provide students with special knowledge, skills and abilities to understand the importance of microorganisms in soil fertility, in the decomposition of dead organic matter, in the nutrient enrichment of soil, in the increase of water penetration, in the improvement of soil texture, to understand the factors responsible for soil health, to acquire knowledge about soil microorganisms, both harmful and beneficial, and to learn the types of interactions that develop between microorganisms (e.g. symbiotic nitrogen fixation, mycorrhiza, antagonism, etc.) as well as with other categories of organisms (e.g. plants).