

Course offered for the STAT PhD program starting from a.y. 2019/2020

TITLE	Nucleic Acid Extraction Techniques from Biological Systems and Environmental Matrices and Techniques of Purification and Characterization of Protein
Lecturer	Marina Pozzolini
Duration and Credits	8 hours - 2 CFU
Course description	This course provides a theoretical and practical overview on the main techniques used for the extraction of the nucleic acids from various biological samples as well as environmental matrices. Isolating high-quality nucleic acids is fundamental for all the techniques that involve downstream processing of PCR amplification as DNA sequencing. Specific protocols aimed at selectively removing DNA polymerase inhibitors will be provided. Will be described the more suitable strategy for DNA\RNA isolation from different biological samples (fungi, algae, high plants, insects and marine invertebrates). Will be focus on the principle and the mechanism of each type of DNA\RNA extraction methods and will compare d based on their performance and yield. Further, will also discuss the advantages and limitation of different methods with specific attention on the factors affecting the yield and the purity. Recommended course for students provided of degree in biology or natural science or biotechnology.
Course organization	This course consists of frontal lessons.
Teaching period	Two days at the end March-beginning of April 2020