

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

TITLE	GREEN TECHNOLOGIES FOR CONTAMINATED SITES
Lecturer	Pietro Marescotti (PA-DISTAV), Enrica Roccotiello (RTDa-DISTAV), Gianni Vercelli (PA-DIBRIS), Mirca Zotti (PA-DISTAV)
Duration and Credits	5 CFU (1CFU Roccotiello, 1CFU Zotti, 1CFU Marescotti, 1 CFU Vercelli, 1 CFU field activities with the four lecturers)
Course description	The course aims to give students principles of environmental monitoring and to furnish a basic approach to bioremediate naturally – anthropogenic contaminated soils by means of living organisms. Frontal lectures address the main characteristics of biotic components (plants and fungi) in contaminated sites also comparing them with natural metal-rich soils. The most common techniques of monitoring contaminated sites, biomonitoring, remediation, and bioremediation are faced and discussed. Innovative techniques of environmental monitoring using multispectral and imaging sensors mounted on UAVs (drones) will be presented and discussed, as well as methodologies of georeferenced data acquisition and dataset preparation. Activities on the field allow the students to gain experiences on the topics covered by theoretical lectures.
Course organization	The course encompasses both lectures and activities on the field. Field activities and surveys in natural metal-rich and contaminated sites complete the activities carried out in the classroom with direct observation and applied methodologies of sampling and monitoring of biotic and abiotic components. Data acquisition using UAVs (drones) will be organized in cooperation of Ce.Dro. – Research Center on Unmanned Aerial Vehicles (Drones) of University of Genoa.
Teaching period	June-July