Direzione Ricerca,
Innovazione e
Internazionalizzazione

UNIVERSITÀ
DI TORINO

ID

VP_203_TER

Visiting Professor Program
Academic Year 2025/2026

TEACHING COMMITMENT: **12 hours**

COURSE TITLE

Groundwater Protection

TEACHING PERIOD

I semester

SCIENTIFIC AREA

Applied Geology

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The course "Groundwater Protection" provides students with a solid theoretical and practical foundation to address critical challenges in groundwater resource protection.
It covers the systemic analysis of hydrogeological characteristics, the interplay between surface and groundwater, and the risks posed by contamination, climate change and human activities. Key topics include water balance, aquifer properties, monitoring techniques, protection strategies and remediation of contaminated sites.
The course combines traditional lectures with practical exercises to apply theoretical concepts and build the skills needed to analyze, model and protect aquifers.
The Visiting Professor activity will focus on the study of groundwater hydrogeochemistry and the relationship between mining activities and surface-groundwater interaction processes. Water quality indexes and aquifer systems vulnerability to define monitoring and remediation techniques on groundwater protection and contamination prevention as water management stategies under climate change scenarios.

LEARNING OBJECTIVES

This course shares the general goal of providing a detailed knowledge of the systemic analysis of the natural environment.
The module Groundwater protection is intended to provide:
- tools for understanding the hydrogeological assessment of an area and the state of health of groundwater resources;
- skills for the use of the main methods for the characterization, monitoring and protection of aquifers;
- an adequate property of language in the hydrogeological field.

OTHER ACTIVITIES BESIDE THE COURSE

VISITING PROFESSOR PROFILE

The Visiting Professor profile should include expertise in environmental geochemistry, particularly on water contaminants and pollution control. His/her board research interests should involve surface and groudwater resources management on climate change scenarios. A good record of supervised students and active international collaboration would be appreciate.

CONTACT REFERENT

Manuela Lasagna
manuela.lasagna@unito.it