

- Faculté des sciences
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Groundwater pollution and remediation (3GH2186)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en hydrogéologie et géothermie (*)	Cours: 30 pg	Voir ci-dessous	5

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante

Daniel Hunkeler

Objectifs

The objective of the course are:

- to become familiar with the most common groundwater contaminants and their sources
- to understand key processes that control the behavior of these contaminants in the subsurface
- to get an overview of field investigation and groundwater remediation methods
- to understand the legal framework related to the management of contaminated sites

Contenu

Overview of common chemicals compounds in groundwater.

Discussion of the major processes that control the migration and transformation of organic and inorganic compounds in the subsurface.

Discussion of site characterization, sampling and analytical methods.

Presentation of Swiss legislation on the management of contaminated sites.

Comparison of different method to evaluate the risks associated with groundwater contamination.

Overview of methods for groundwater remediation.

Forme de l'évaluation

Written exam (1h) in last afternoon of course.

Documentation

Power Point presentation.

Script explaining major processes that control the behavior of organic contaminants.

Documentation of case study.

Pré-requis

Hydrochemistry and Microbiology.

Forme de l'enseignement

Lectures and exercises

Case studies where students propose a site investigation strategy for a site in groups, followed by a presentation.

(*) Cette matière est combinée avec d'autres matières pour l'évaluation