

- 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: 40 pg	Voir ci-dessous	6

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

Période d'enseignement:

- Semestre Automne

Equipe enseignante

Daniel Hunkeler

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

CA graded combined with Urban hydrogeology

Written exam (1.5h) in last afternoon of course.

Retake attempt: Written test (1.5h) during exam session following the course, coordinated with professor.

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 linking the different parts of the course:
 - Proposal of site investigation strategy
 - Risk assessment for a polluted site to evaluate need for monitoring/remediation
 - Proposal of remediation method

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