

- Faculté des sciences
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### Numerical modelling of hydrochemical processes (3GH2180)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en hydrogéologie et géothermie</b>	<b>Cours: 20 pg</b>	<b>controle continu: 1</b>	2

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 is to become familiar with key concepts to simulate the behaviour of chemical compounds in groundwater and to get to know common tools used for it. The course covers naturally occurring chemicals as well as contaminants.

#### Contenu:

- The course covers the following topics
- Overview of important factors that control reactive processes in the subsurface
  - Discussion of mathematical description of processes
  - Overview of codes that can be used to simulate reactive processes
  - Hands/on exercises with a widely used code to simulate reactive processes
  - Presentation of cases studies illustrating how principles and codes can be applied

#### Forme de l'évaluation:

Short report on one of the case studies  
Test (1h) in the afternoon of the last day of the course

#### Documentation:

Power point presentations  
Tutorials illustrating step by step how the tools can be applied

#### Pré-requis:

Cours Hydrochemistry and Microbiology

#### Forme de l'enseignement:

Lectures and hands-on exercises