


# UE Géochimie des contaminants II) modélisation Phreeqc

 ECTS  
3 credits

 Component  
UFR PhITEM  
(physique,  
ingénierie, terre,  
environnement,  
mécanique)

 Semester  
Automne

- > Teaching language(s): English
- > Open to exchange students: Yes
- > Code d'export Apogée: PAX7GRAE

## Presentation

### Description

*This optional module is intended for students wishing to deepen their knowledge of the behavior of metals in natural soils and waters and in mining environments. It is based on the PHREEQC geochemical modeling software which is a reference in the scientific world and is freely available. The first sessions are dedicated to the step-by-step learning of the software in the classroom and in tutored sessions, the following sessions are dedicated to the modeling of equilibrium speciation processes in soils and groundwater (hydrolysis, Eh-pH diagrams, complexation and toxicity, 1D reactive transfer of pollutions in soils, redox processes) and mining processes (acid mine drainage, genesis of a mining reservoir, solubility  $f(T, p)$ ). The last two sessions are dedicated to projects elaborated by the students in pairs.*

*Language: English, bilingual notices.*

### Course parts

CMTD	Lectures (CM) & Teaching Unit (UE)	6h
TD	Tutorials (TD)	18h

# Useful info

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## Campus

› [Grenoble - University campus](#)