UE Air, soil, water : introduction to environmental pollutants modelling

ECTS
6 credits

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

Semester
Automne

- **Teaching language(s):** English, French
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX7HMAB

Presentation

Description

Every year, mankind emits into the environment large quantities of chemical compounds, notably organic ones, some of which may have an environmental impact far from where or when they were emitted.

The primary objective of this course is to learn how to analyse environmental problems, to estimate the most important phenomena and to provide first-order approximate answers to these problems. By the end of the course, you should:

- Be able to define a simple model to evaluate the fate of chemical compounds in the environment: box models
- Be able to solve this type of model, if necessary numerically with a common tool (python)
- Understand how / where to find data to configure these models
- Know some methods for evaluating the uncertainties of your numerical model
- Develop some environmental common sense

Teaching language

- all courses documents are available in both english and french

- most activities are group-based, and groups work either in english or french depending on people present - there is always at leas a french group and at least an english group

Course parts

UE Air, soil, water : introduction to environmental pollutants modelling - CM/TD	Lectures (CM) & Teaching Unit (UE)	48h

Recommended prerequisites

- a good understanding of basic physical concepts: conservation of mass, dimensional analysis...
- basic math: first order differential equation, coupled equations.
- basic chemistry: notion of molecule, phase equilibrium, adsorption

Useful info

Campus

› Grenoble - University campus