UE Exploration geophysics

ECTS
6 credits

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

Semester
Printemps

> **Teaching language(s):** French

> **Open to exchange students:** Yes

> **Code d'export Apogée:** PAX8GEAA

Presentation

Description

This module is intended to supplement the subsurface geophysics teaching with a detailed mathematical description of geophysics imaging techniques adapted to petroleum, mining and crustal objectives.

Particular focus is given to the main following methods:

- seismic reflection signals; principles of acquisition and data processing (theory and practical exercices on academic and industrial softwares) with application to several datasets acquired in marine environment and on the ground at various scales of the Earth's crust.

- interpretation of controlled source electromagnetic (CSEM) data and gravimetry,

- electromagnetic prospection in diffuse regime

The seismic part of this lecture aims at proving a solid background fo further interpretation, which is taught in the "bassin analysis" class.

Evaluation is based on the reports from the practical works and on a final exam.

Course parts

CMTD	Lectures (CM) & Teaching Unit (UE)	15h
TD	Tutorials (TD)	3h
TP	Practical work (TP)	30h

Recommended prerequisites

To follow the advanced data processing methods taught in this class, it is highly recommended that students have followed the "data and models in Earth sciences" in semester 7.

Period : Semester 8

Skills

Solid background on the data processing in exploration geophysics based on electromagnetic and seismic methods.

Useful info

Contacts

Program director
Romain Brossier
✉ Romain.brossier@univ-grenoble-alpes.fr

Place

> Grenoble

Campus

> Grenoble - University campus