

Geophysical Data Acquisition & Processing

Introduction

Geophysics provides technology with which we can "look" into the subsurface. It is a key enabler of many activities in the search for hydrocarbons, minerals, and fresh water. It is also extensively used in the domain of monitoring pollution and rejuvenation of polluted sites. The course provides the fundamentals of seismic refraction & reflection methods, the use of gravity, magnetic, electrical, and electromagnetic methods, also in combination with seismic data. Modern geophysical acquisition and processing techniques will be taught not only based on powerpoint presentations and videos, but also by applying the theory in Excel based exercises

Who should attend?

Geologists, Geophysicists and Petroleum engineers, involved in exploration and development of oil and gas fields and for those involved in projects related to the shallow subsurface, especially important for geothermal energy, CO2 sequestration and placing of windfarms. In addition, it would be useful for those dealing with the (geo)physical effects of production of a field (induced seismicity).

Learning methods and tools

The course uses a user-friendly Learning Management System, called Moodle. In Moodle different modules provide study material, videos, and exercises. Also, each day contains a quiz using the software "Mentimeter", which is meant to reinforce the learning.

Requirements

A reasonable level of understanding of geology and geophysics.