



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Geoenergy and Geomechanics

2425-1-124R030

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#### Title

\*\*Geoenergy and Geomechanics

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#### Teacher(s)

Riccardo Castellanza ; Giovanni Crosta

#### Language

English

#### Short description

This course aims to:

(i) provide introductory and advanced knowledge relative to deep and shallow geothermal systems and energy, and reservoir behaviour;

(ii) describe advanced testing for physical and geomechanical characterization focused on reservoir rocks;

(iii) describe problems concerning the underground storage of gases and fluids.

The course is subdivided in 5 parts:

(1) Shallow geothermal systems, thermal potential of shallow aquifers, conduction and advection;

- (2) Geothermal systems, description, reservoir fluid characterization, convection cells in porous media;
- (3) Physical mechanical properties and testing methods;
- (4) Definitions of problems concerning the storage of CO<sub>2</sub>, methane and other fluids at depth;
- (5) Case studies of heat flow transport

Evaluation: YES

## **CFU / Hours**

2 CFU - 16 Hours (lecture)

## **Teaching period**

I Semester

## **Sustainable Development Goals**

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