

Geothermal Systems, Structural Geology and Critical Raw Materials

From renewable energy to strategic resources in geothermal brines

An advanced international programme exploring geothermal systems as integrated subsurface resources, combining geothermal energy, structural geology and Critical Raw Materials (CRMs) contained in geothermal brines.



Main themes

- Critical Raw Materials in geothermal brines (e.g. lithium)
- Geodynamics and crustal extension
- Stress, strain, brittle and ductile deformation
- Fault zones, fracture networks and permeability
- Fluid-rock interaction and hydrothermal alteration
- Geothermal energy systems
- Virtual Reality and 3D geological visualization

Programme structure

Online phase

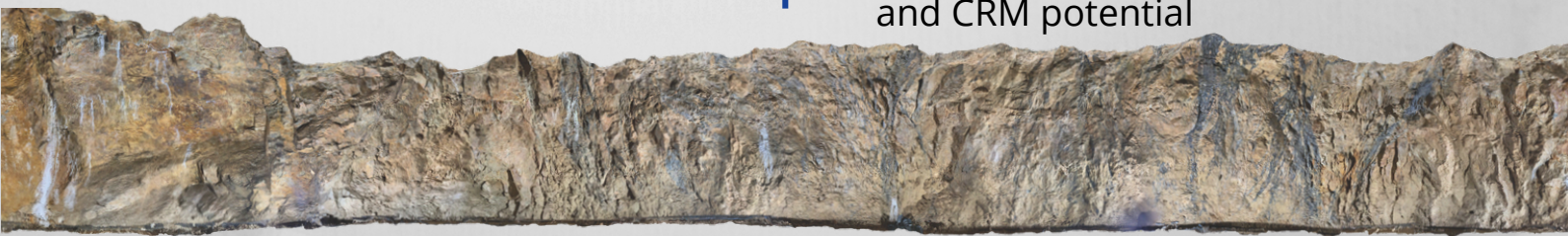
9 hours from late May to early June

- Core lectures on geodynamics, deformation and geothermal systems
- 3D outcrop analysis and immersive virtual fieldwork (VR)
- Preparation for field observations and group work

On-site intensive phase

15-20 June 2026

- Fieldwork in geothermal reservoir analogues
- Underground mine visits in fractured crystalline basement
- Visits to active geothermal power plants (Upper Rhine Graben)
- Integrated interpretation of energy and CRM potential





Requirements

- Advanced Bachelor, Master & PhD students
- Background in Geology, Earth Sciences, Geothermal Energy or Geosciences
- B1 English level

Practical information

- **ECTS:** Up to 3 ECTS
- **Program fee:** Tuition free of charge
- **Included:** courses, transportation for site visits, mine entrance fees
- **Not included:** transportation to and from Beauvais, accommodation & subsistence costs
- **Funding option:** Erasmus+ student mobility grant to cover non-included costs (subject to eligibility at the home university)
- **Application deadline:** April 28

Contact

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A detailed syllabus and academic description are available upon request

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