MSc. of Geosciences

Year One
Fall Semester

Geology and Georesources 1	ECTS
Geology of the world	3
Regional geological framework	3
Reservoir modelling 1	3
Fluids and basin evolution	
Mineral resources 1	3
Exogenous ore deposits	

Transversal tools	ECTS
Geographical information systems	2
Applied programming in Python	2
Writing in the sciences	2

Data analysis and modeling 1	ECTS
Signal processing	3
Inverse methods	3
Potential field methods	3
Seismic methods	3

Year One
Spring Semester

Geology and Georesources 2	ECTS
Seismic stratigraphy, well log analysis	3
Reservoir modelling 2	3
Research Project	3

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Hydrosystems	ECTS
Hydrological modeling 1	3
Environmental geosciences	3
Geochemical modeling 1	3
Mixing and dynamic systems	

Data analysis and modeling 2	ECTS
Finite elements	6
Partial differential equations	
Finite element modeling for thermal systems	
Geophysical fieldwork	3
Geophysical modelling 1	3

Year Two
Fall Semester

Fluid and mineral resources	ECTS
Hydrological modeling 2	3
Porosity, permeability and hydrogeophysics	
Geochemical modeling 2	3
Reactive transport	
Reservoir modelling 3	3
Rock Physics	
Mineral resources 2	3
Igneous related ore deposits	

Geological structures characterization	ECTS
Geological case studies	3

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Geological fieldwork	3
Large scale seismic imaging	3
Data analysis and modeling 3	**ECTS**
Satellite data and applications	3
Geoscience software	3
Machine learning in the geosciences	3

Year Two
Spring Semester

Internship	ECTS
Research or industry Internship	30