



Montanuniversität
Leoben

MASTER OF SCIENCE IN

Geoenergy Engineering

Do you want to drive renewable energy forward?

As the world accelerates its transition to renewable energy, the demand for highly skilled geoenergy engineers is rapidly increasing. That's why the master's programme in Geoenergy Engineering prepares you to harness the sustainable potential of the subsurface for energy production and storage.

The English-taught programme integrates theoretical foundations with practical applications grounded in geoscience and engineering. The curriculum covers geothermal energy, geological energy storage, decarbonization, and the transport of liquid and gaseous energy carriers. As you study you will develop advanced technical knowledge alongside interdisciplinary problem-solving, leadership, and intercultural competencies.

As industries transition to low-carbon energy systems, your expertise will enable you a global career in energy companies, public institutions, service providers, and academia. Where you will work to drive renewable energy forward.

Move mountains

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MASTER'S PROGRAMME

Geoenergy Engineering

PROGRAMME STRUCTURE | 120 ECTS

1st Semester (29 ECTS)

Geophysics and Reservoir Geomechanics	7 ECTS
Geomodeling & Mechanics	6 ECTS
Advanced Geochemistry	4 ECTS
CO2 Capture, Storage and Utilization	3 ECTS
Energy Landscape and Decarbonization	3 ECTS
Health, Safety and Environment	2 ECTS
Geoenergy Exploration & Economics	4 ECTS

2nd Semester (32 ECTS)

Reservoir Modelling and Simulation	6 ECTS
Well Placement, Construction and Testing	6 ECTS
Mechanical Earth Modeling	5 ECTS
Numerical Methods in Geomechanics	5 ECTS
Geothermal Reservoir Engineering	3 ECTS
Field Development and Energy Storage	4 ECTS
Literature Review Project	3 ECTS

3rd Semester (29 ECTS)

Core Analysis & Digital Rock Physics	4 ECTS
Project Management & Sustainability	3 ECTS
Decision-Making and Risk Analysis	4 ECTS
Formation Impairment and Stimulation	2 ECTS
Natural Gas and CO2 Technology	3 ECTS
Advanced Well Monitoring and Analysis	4 ECTS
Well Integrity & Development	3 ECTS
Geological Carbon & Hydrogen Storage	3 ECTS
Underground Energy Storage Operation	3 ECTS

4th Semester (30 ECTS)

Master Thesis	30 ECTS
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For programme details and
registration follow the link.



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