

# Move mountains

With your studies in  
Geoenergy Engineering

FIELD OF STUDY: RAW MATERIALS

►► Our greatest  
future potential  
is waiting just  
below the  
surface.

Bianca Brandstätter  
Student  
Geoenergy Engineering



## Technical University of Leoben

Franz Josef-Straße 18  
8700 Leoben  
+43 3842 402-0  
unileoben.ac.at  
info@unileoben.ac.at

Online pre-registration  
for admission:



 Technical University  
of Leoben



Technical University  
of Leoben

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FIELD OF STUDY: RAW MATERIALS

# Geoenergy Engineering

BACHELOR'S & MASTER'S PROGRAMMES

# Geoenergy Engineering



▶▶ We are developing innovations for a better balance between energy production and the environment.

Dipl.-Phys. Dr.rer.nat. Holger Ott  
Head of the Department of Reservoir Engineering

## Do you want to draw energy from the earth – for the earth?

As a geoenergy engineer, you will be in demand worldwide – at large companies in the energy industry, local energy suppliers, national and international institutions, and in research and development for future energy systems. You will connect the conventional and alternative energy sectors and make a significant contribution to the energy transition. You can pursue a career as a Reservoir Engineer, Drilling Engineer, or Geothermal Project Developer just to name a few.

Start your studies now at: [unileoben.ac.at/en/studying/bachelors-programmes/resources/geoenergy-engineering-en/](https://unileoben.ac.at/en/studying/bachelors-programmes/resources/geoenergy-engineering-en/)

Semester 1 and 2 – First Joint Year of Study (60 ECTS)	
<b>Introductory Module</b>	<b>Fundamentals of Engineering</b>
<ul style="list-style-type: none"> <li>Transferable Skills</li> <li>Introduction to STEM (science, technology, engineering, mathematics)</li> </ul>	<ul style="list-style-type: none"> <li>Chemistry</li> <li>Mathematics</li> <li>Physics</li> <li>Engineering Mechanics</li> </ul>
<b>Digital Competences and Statistics Fundamentals</b>	<b>Introduction to Study Programme</b>
<ul style="list-style-type: none"> <li>Introduction to Data Modeling</li> <li>Algorithms and Programming</li> <li>Statistics</li> </ul>	<ul style="list-style-type: none"> <li>Bacc Fundamentals</li> <li>Fundamentals of Geosciences</li> <li>Elective Bacc Fundamentals</li> </ul>
Compulsory Courses 3 to 6 Semester (120 ECTS)	
<ul style="list-style-type: none"> <li>Sedimentology</li> <li>Petroleum Geology</li> <li>Hydrogeology and Geothermal Systems</li> <li>Drilling Engineering and Well Design</li> <li>Completion Engineering and Well Design</li> <li>Reservoir Engineering Fundamentals</li> <li>Reservoir Thermodynamics</li> </ul>	<ul style="list-style-type: none"> <li>Fluid and Heat Transport in Porous Media</li> <li>Geoenergy Production Principles</li> <li>Cost Accounting and Investment Calculation</li> <li>Accounting</li> <li>Mining Law</li> <li>Geoenergy Economics</li> <li>Scientific Report Writing and Presentation Skills</li> <li>Bachelor's Thesis Seminar</li> </ul>
Elective Courses	
<ul style="list-style-type: none"> <li>Fundamentals of Geosciences</li> <li>Applied Geophysics</li> <li>Geophysical Well Logging and Petrophysics</li> <li>Engineering Mechanics</li> <li>Mechanical Technology</li> </ul>	<ul style="list-style-type: none"> <li>Electrical Engineering</li> <li>Physical Chemistry</li> <li>Numerical Methods</li> <li>Fluid Mechanics</li> <li>Do-it-Lab in Geoenergy Engineering</li> </ul>
Semester 7 (30 ECTS)	
Internship	

### BACHELOR'S PROGRAMME

## How can we supply society with sustainable energy around the clock?

In the promising Bachelor's programme in **Geoenergy Engineering**, you will learn about innovative technologies and processes for the energetic and sustainable use of the subsurface. These include "clean" decarbonised fossil fuels and alternative energies such as geothermal energy and hydrogen. You will learn everything from the search for and characterisation of geological deposits to their development, simulation and exploitation through deep drilling, right through to the extraction and storage of energy. You can then specialise in the disciplines of drilling, petroleum production and reservoir engineering, or master economic and technical challenges.

### MASTER'S PROGRAMME

## Ready to deepen your knowledge?

In the Master's programme in Geoenergy Engineering, you will consolidate your knowledge of underground energies, geothermal energy as a natural energy source and the subsurface as an energy and CO<sub>2</sub> storage facility in the following areas:

- Geothermal energy
- Geological energy storage
- Extraction and transport of energy sources and raw materials
- Strategies for decarbonisation in the energy sector and other industries

Detailed study plans for the degree programmes at the Technical University of Leoben can be found at: [unileoben.ac.at/studium/](https://unileoben.ac.at/studium/)