

Move mountains

With your studies in Pipeline Engineering

►► Modern energy systems rely on safe and efficient pipeline transport.

Anna Cernetchi
Student
Geoenergy Engineering



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Online pre-registration for admission:



 Technical University of Leoben



Technical University of Leoben

Move mountains

FIELD OF STUDY: RESOURCES

Pipeline Engineering

MASTER'S PROGRAMME

Pipeline Engineering



▶▶ The Pipeline Engineering programme prepares engineers for the challenges of a rapidly evolving energy landscape, combining academic expertise with strong industry relevance and practical problem-solving skills.

Dr. Riyaz Kharrat
Programme Coordinator
Pipeline Engineering

Do you want to help shape solutions for modern energy infrastructure?

In the Master's programme in Pipeline Engineering, you will acquire theoretical and practical knowledge in fluid mechanics, thermodynamics, materials science and infrastructure engineering. You will learn to design, analyse and optimise pipeline systems used for the safe and efficient transport of energy and resources.

Pipelines play a key role in hydrogen transport, CO₂ transport for carbon capture and storage (CCS), hydrocarbons transport, geothermal energy production and district heating networks.

Start your studies now at: unileoben.ac.at/studying

Semester 1–3 Core Pipeline Engineering (60 ECTS)	
Pipeline Design <ul style="list-style-type: none"> Basics of Pipeline Engineering and Design Fundamentals Pipeline Routing and Civil Design General Aspects of Station and Terminal Design & Equipment Selection Pipeline Systems for Water Transmission and Similar Fluids 	Pipeline Materials & Construction <ul style="list-style-type: none"> Pipeline Materials and Mechanical Design Pipeline Construction Pipeline Instrumentation and Automation Special Pipeline Systems
Pipeline Operation & Integrity <ul style="list-style-type: none"> Pipeline Operation, Integrity Management and Maintenance Pipeline Project Management Energy Pipeline Systems Hydrocarbon Transport CO₂ Transport for CCS 	Energy Systems, Economics & Sustainability <ul style="list-style-type: none"> Geoenergy Economics Project Management Integrated Energy Landscape and Decarbonization Carbon Capture, Utilization and Sequestration Health, Safety and Environment
Elective Courses (30 ECTS)	
<ul style="list-style-type: none"> Reservoir Characterization and Modeling Geological CO₂ and H₂ Storage Geothermal Reservoir Engineering Hydrogen Economy: Methods, Energy Security and Environmental Aspects Underground Energy Storage Artificial Lift Data Acquisition and Management Improving Sustainability with Reliability Management Business Administration Energy Law 	
Semester 4 (30 ECTS)	
<ul style="list-style-type: none"> Seminar Master Thesis Master Thesis Master Thesis Defense 	

Misprints and typographical errors excepted. Changes to the curriculum prior to the start of the programme are expressly reserved.

MASTER'S PROGRAMME

How do modern pipeline systems enable the energy transition?

In the Master's programme in Pipeline Engineering, you will acquire theoretical and practical knowledge in the design and operation of infrastructure systems used for transporting energy and resources. You will learn how engineering solutions ensure safe, reliable and efficient transport over long distances and under demanding operating conditions.

Pipeline systems are essential for transporting hydrogen, CO₂ for carbon capture and storage (CCS), hydrocarbons, geothermal fluids and district heating media. You will combine interdisciplinary engineering skills to analyse complex transport systems and support the development of sustainable and resilient energy infrastructure.

MASTER'S PROGRAMME

Ready to deepen your knowledge?

In the Master's programme, you will develop technical expertise across the full lifecycle of pipeline systems, from design and construction to operation, integrity management and optimisation.

You can pursue careers in:

- Pipeline Engineering
- Flow Assurance Engineering
- Integrity Management
- Energy Infrastructure Engineering
- Hydrogen Transport Engineering
- CO₂ Transport for CCS
- Hydrocarbon Transport Engineering
- Project Engineering
- Energy Consulting
- Asset Integrity Management

Detailed study plans for the degree programme can be found at: unileoben.ac.at/studium