



Technical University
of Leoben

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DEPARTMENT
GEO ENERGY

Pipeline Engineering Programme

Module MC11: Pipeline Operation, Integrity Management, and Maintenance



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Key Facts

- ✓ **Duration:** 2 weeks
- ✓ **Format:** In-person & online (Leoben, Austria)
- ✓ **Language:** English
- ✓ **Certificate:** Micro-Credential (ECTS transferable)
- ✓ **Prerequisites:** Technical background in fluid mechanics, basics of pipeline engineering, or design fundamentals recommended; none required

Key Learning Outcomes

1. Operate pipeline systems using best practices and modern monitoring tools.
2. Apply integrity management techniques to assess and maintain pipeline condition.
3. Use preventive, predictive and condition-based maintenance strategies.
4. Select and apply effective methods for pipeline repair and rehabilitation.
5. Ensure safety and environmental compliance during operations and maintenance.
6. Develop and manage emergency response plans for incidents.

Module Overview

This module provides a detailed overview of pipeline operation, integrity management, maintenance and repair. It covers efficient operation, advanced monitoring and control, and integrity methods such as in-line inspection and non-destructive testing. Practical maintenance and field repair techniques are also addressed, equipping participants with the skills needed to manage safe and reliable pipeline systems in diverse environments.

Course Outline

1. **Pipeline Operation:** Operating procedures, SCADA monitoring, flow and pressure control, performance optimisation and safety compliance.
2. **Integrity Management:** Principles of integrity assessment, in-line inspection and NDT methods, corrosion control, risk mitigation and regulatory requirements.
3. **Pipeline Maintenance and Repair:** Preventive and risk-based maintenance, pigging, emergency response and repair techniques such as clamps, sleeves/wraps, welding and pipe exchange.

Instructors

Dirk Strack Consultant

Strack International Consulting (SIC)

Dirk Strack has more than 35 years of experience in the international oil and gas industry. After senior technical and management roles at the Transalpine Pipeline, he has been working as an independent consultant since 2019, advising on technical, operational, safety and compliance topics and lecturing at international conferences.



Michael Beller

Member of ROSEN's Corporate Strategy Office

Michael Beller has over 37 years of experience in the pipeline industry and is part of the Corporate Strategy Office at the ROSEN Group. His background spans pipeline inspection and integrity, with long-standing involvement across technical and commercial roles. He has also delivered training courses for the pipeline industry for more than 20 years.

