

1 Integrated Pipeline Geohazard Management – A Practical Approach

1.1 Course Description

The course builds upon participants' foundational understanding of pipeline geohazard management. This is examined in a practical manner throughout the pipeline life cycle using the latest PRCI research. It offers descriptions of geohazards, available industry guidance on their management, and available monitoring and mitigation approaches used during the design, construction, and operations of pipelines. The course explores the emerging issue of climate change, which has the potential to affect geohazard management.

An industry-leading Subject Matter Expert Instructor will guide learners through a combination of lectures and interactive individual and group learning activities to reinforce course concepts. The course also includes a question-and-response session with a guest speaker, who will provide real-world examples of geohazard management in practice.

Join, network with industry counterparts and leaders, and equip yourself with latest geohazard management tools and techniques!

Format: In-Person, [In-House]

Duration: 3 days

Recommended Prerequisite Courses:

- Fundamentals for the Management of Pipeline Geotechnical Hazards
- Fundamentals for the Management of Pipeline Hydrotechnical Hazards
- Fundamentals of Pipeline Engineering Design & Construction for Geohazard Management

Required Materials:

- N/A

1.2 Learning Objectives

By the end of the course, participants should be able to:

1. Identify and describe the types of pipeline geohazards and their applications in real-world scenarios.
2. Understand the evolution of available industry guidance covering the management of pipeline geohazards.
3. Devise realistic geohazard solutions for the design and construction stage of a pipeline.
4. Compare and contrast the benefits and limitations of various monitoring and mitigation options for pipeline geohazards.
5. Articulate geohazard management decisions, and their impact, at each stage of the pipeline lifecycle.
6. Evaluate the implications of climate change for the management of pipeline geohazards.

1.3 Who Should Take This Course

The course is best suited for:

- Early-to-mid-career practitioners with an engineering / technical background (e.g., technicians, technologists, engineers)
- Individuals with a basic understanding of pipeline design, construction, and operation principles and activities.
- Individuals with a basic knowledge in civil works, geotechnical, and/or environmental domains.

1.4 Course Topics

Main topic areas covered in this course include:

- Day 1
 - Background Information
 - Learning Activity 1: Pipeline Life Cycle and Geohazard Management
 - Introduction to Pipeline Geohazards
 - Learning Activity 2: Pipeline Geohazard Classifications
- Day 2
 - Geohazard Related Industry Guidance
 - Learning Activity 3: Evolution of Regulation and Practice
 - Addressing Pipeline Geohazards at the Design and Construction Stages
 - Learning Activity 4: Addressing Geohazards at the Design and Construction Stages
 - Pipeline Geohazard Monitoring
 - Pipeline Geohazard Mitigation
 - Learning Activity 5: Geohazard Response Scenario
- Day 3
 - Integrated Pipeline Geohazard Management
 - Learning Activity 6: Integrated Geohazard Management, Real-World Application
 - Emerging Issues (Developing Climate Resilience)
 - Learning Activity 7: Emerging Issues - Climate Resilience
 - Guest Speaker: Question and Response, Real-World Examples, “Ask Me Anything”