

## 1 Introduction to Pipeline Operations

### 1.1 Course Description

This course introduces learners to the fifth stage of the pipeline lifecycle: operations. The course covers key topic areas, including the role of the operations stage within the pipeline lifecycle and the two basic elements of a pipeline system necessary to operations: a pipeline (and its components) and facilities (such as compressor and pump stations, as well as meter stations). Self-assessments are used to reinforce key concepts, and a final graded assessment evaluates the learner's understanding of the material. The online course format provides individuals the flexibility to review and reinforce the material at their own pace. What sets this course apart is that it equips learners with a basic understanding of the fifth stage of the pipeline lifecycle, which is foundational for further learning in the pipeline industry.

**Format:** Online

**Duration:** ~1 hour

**Prerequisite Courses & Materials:**

Introduction to the Pipeline Industry

### 1.2 Learning Objectives

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

1. Define the basic elements that make up a pipeline system.
2. Identify the major components of each pipeline system element.

### 1.3 Who Should Take This Course

The course is best suited for:

- Individuals seeking basic knowledge about the operations stage of the pipeline lifecycle.
- Individuals considering or pursuing careers in the pipeline industry.

### 1.4 Course Topics

Main topic areas covered in this course include:

- Background
  - Pipeline Operations
  - Pipeline Construction Completed
  - Basic Elements
  - Definitions of Basic Elements
- Pipeline Components
  - Pipe
  - Cathodic Protection Systems
  - Instrumentation and SCADA Systems
  - Valves
  - Launcher and Receiver Systems
  - Right-Of-Way
- Compressor and Pump Stations
  - Compressor and Pump Stations (Gas Flow, Liquid Flow)
  - Driver/Engine
- Meter Stations
  - Measurement
  - Meter Station Components