



London TDM

# Oil and Gas Industry Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 09 November 2025 To 13 November 2025

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This 5-day professional course on Reservoir Engineering and Simulation is designed to equip participants with the fundamental principles and advanced techniques necessary to understand and apply reservoir engineering concepts in the field of petroleum engineering. Participants will gain a comprehensive understanding of reservoir behavior, simulation models, and the application of these models to optimize hydrocarbon recovery.

## Objectives

- Understand the basics of reservoir engineering principles.
- Learn about different reservoir simulation techniques and software.
- Develop skills to analyze reservoir performance and forecasts.
- Apply simulation models to enhance reservoir management strategies.
- Interpret and validate simulation results to make informed decisions.

## Course Outlines

### Day 1: Fundamentals of Reservoir Engineering

- Introduction to Petroleum Reservoirs
- Reservoir Rock and Fluid Properties
- Types of Reservoirs and Drive Mechanisms
- Material Balance Equations
- Reservoir Flow Dynamics

### Day 2: Well Performance and Productivity

- Well Inflow Performance Relationships (IPR)
- Production Forecasting Techniques
- PVT Analysis and Applications
- Well Testing and Analysis
- Artificial Lift Methods

### Day 3: Introduction to Reservoir Simulation

- Principles of Reservoir Simulation
- Types of Simulation Models
- Grid Design and Initialization
- Simulation Software Overview
- Building a Basic Reservoir Model

### Day 4: Advanced Simulation Techniques

- History Matching and Calibration
- Forecasting and Predictive Analysis
- Enhanced Oil Recovery (EOR) Simulations
- Geomechanics in Reservoir Simulation
- Case Studies and Practical Applications

## **Day 5: Reservoir Management and Optimization**

- Reservoir Surveillance and Monitoring
- Decision-Making in Reservoir Management
- Integrating Simulation with Field Development Planning
- Risk and Uncertainty Analysis
- Final Project Presentation and Review