

**Training
Course**

**Reservoir Engineer Reservoir
Characterization & Monitoring
Strategies**

Course Plan

Introduction

Understanding and managing hydrocarbon reservoirs is crucial for maximizing production and ensuring long-term asset value. The “Reservoir Engineer: Reservoir Characterization & Monitoring Strategies” course provides a comprehensive exploration of how to evaluate, characterize, and monitor reservoirs effectively. Participants will gain critical knowledge in geological interpretation, fluid flow analysis, reservoir modeling, and surveillance techniques essential for optimizing recovery and informing strategic decisions throughout the reservoir’s lifecycle.

Course Objectives:

- ✓ Understand the principles of reservoir characterization and modeling.
- ✓ Analyze reservoir properties such as porosity, permeability, and saturation.
- ✓ Interpret geological and petrophysical data for reservoir evaluation.
- ✓ Learn different methods of reservoir monitoring and performance tracking.
- ✓ Apply material balance, decline curve analysis, and simulation tools.
- ✓ Optimize production strategies based on reservoir behavior.
- ✓ Enhance decision-making through advanced surveillance techniques and data integration.
- ✓ Develop strategies for maximizing reservoir recovery and minimizing risks.

Who Should Attend?

- Reservoir Engineers and Petroleum Engineers
- Geologists and Geophysicists involved in reservoir studies
- Production and Development Engineers
- Field Engineers and Operations Staff
- Technical Project Managers in Oil & Gas
- Technical professionals involved in subsurface evaluation and asset management
- Graduate engineers aiming for careers in reservoir management

Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

Course Outline:

Day One

- Introduction to Reservoir Engineering and Role of the Reservoir Engineer
- Fundamentals of Reservoir Rock Properties (Porosity, Permeability, Saturation)
- Fluid Properties in Reservoir Engineering (Oil, Gas, Water Behavior)
- Reservoir Drive Mechanisms and Recovery Methods
- Geological and Geophysical Data Interpretation for Reservoir Characterization

Day Two

- Core Analysis and Well Logging Techniques
- Petrophysical Evaluation and Rock Typing
- Reservoir Mapping and Structure Modeling
- Static and Dynamic Reservoir Models: Concepts and Applications
- Material Balance Methods and Reservoir Estimation

Day Three

- Volumetric Analysis for Initial Hydrocarbon Estimation
- Decline Curve Analysis for Production Forecasting
- Pressure Transient Testing and Analysis (PTA)

- Well Testing: Types, Procedures, and Data Interpretation
- Reservoir Simulation Principles and Use in Field Development

Day Four

- Enhanced Oil Recovery (EOR) Techniques Overview
- Waterflooding Design and Performance Monitoring
- Surveillance Techniques: Pressure, Rate, and Saturation Monitoring
- Time-Lapse (4D) Seismic for Reservoir Monitoring
- Integrating Production Data with Reservoir Models

Day Five

- Uncertainty Analysis and Risk Management in Reservoir Studies
- Reservoir Management Strategies for Mature Fields
- Well Placement and Optimization Strategies
- Sustainability Considerations in Reservoir Development
- Case Studies: Successful Reservoir Characterization and Monitoring Projects

Training Details

Course Duration	5 Days
Pre-Schedule	21 – 25 Dec 2025
Venue	Spain - Barcelona
Training Fees Per Person	KWD 1800 (One Thousand Eight Hundred Only)
Course Fees Include	<ul style="list-style-type: none"> ✓ Tuition documentation ✓ Curriculum and Training Handout ✓ Five star Lunch ✓ Completion Certificates