

Reservoir Management

Course Price

£3050

Course Description

This course will address all the principles of reservoir management. The reservoir management process with integrated concept, role of reservoir simulation in reservoir management and importance of reservoir surveillance and monitoring for the whole reservoir management process will be discussed. The significance of the production optimization process in addition to the economics evaluation will be incorporated. The course covers all aspects related to hydrocarbon recovery methods starting from the primary recovery and up to enhanced oil recovery. The course will focus on different aspects of reservoir management applications for new reservoirs, matured reservoirs, reservoir with small gas caps, reservoir with huge gas caps, thin oil rims, reservoirs with new infill opportunities and fractured reservoirs.

Course Objectives

- Understand the principles of reservoir management concept and process
- Understand reservoir management integration concept
- Understand the role of reservoir modeling in the reservoir management process
- Gain sufficient knowledge on the project economics evaluation
- Understand Reservoir Surveillance and Monitoring
- Gain better knowledge on importance of production optimization
- Aware by different aspects of reservoir management applications

Who Should Attend

Petroleum, Reservoir and production engineers, Geoscientists, managers, technicians, and other related disciplines.

Course Content

Day 1

- Introduction



- Course Objectives
- Reservoir Management Definition
- Reservoir Management Concept
- Integrated Reservoir Management Concept
- Getting to Understand Your Reservoir
- Reservoir Drive Mechanisms
- Reservoir Rock Properties
- Reservoir Fluid Properties
- Reservoir Performance
- Reservoir Management Process
- Reservoir Data Management and Interpretation

Day 2

- Role of Simulation in Reservoir Management
 - Reservoir Characterization
 - Developing Reservoir Static Model
 - Developing Reservoir Dynamic
 - Fluid Characterization/PVT Modeling
 - Dynamic Model Calibration
 - Setting Reservoir Future Predictions

Day 3

- Oil Recovery Methods
 - Primary Recovery
 - Secondary Recovery
 - Water Flooding
 - Flooding Patterns
 - Factors Affecting Water Flooding
 - Fractional Flow Curve
 - Enhanced Oil Recovery
 - EOR Concept
 - EOR Screening Criteria
 - EOR Types
- Production Optimization Using Nodal Analysis Approach
 - Objective of Nodal Analysis
 - Production System Pressure Losses
 - Nodal Analysis Approach
 - Inflow/Outflow Curves
 - Applications of Nodal Analysis

Day 4

- Reservoir Economic Evaluation
 - Economic Fundamentals
 - Economic Parameters

– Economic Optimization

- Reservoir Surveillance, Monitoring & Testing

- Importance of Reservoir Surveillance for Reservoir Management

- Reservoir Measurements Parameters

- Reservoir Monitoring Program

- Well Test Objectives

- Types of Well Tests

- Define Test Input/output Data

Day 5

- Reservoir Management Case Applications

- New Reservoirs

- Matured Reservoirs

- Reservoirs with small Gas Caps

- Reservoirs with Huge Gas Caps

- Thin Oil Rims

- Reservoirs with new infill opportunities

- Fractured Reservoirs

- End Session/Discussion

CPD Unit

Continuing Professional Development

35 HOURS CPD