MERCURY

Applied Reservoir Engineering Course

21 - 25 Oct 2024
Barcelona (Spain)

Applied Reservoir Engineering Course

Ref.: 15124_303048 **Date:** 21 - 25 Oct 2024 **Location:** Barcelona (Spain) **Fees:** 5500 **Euro**

Introduction:

This oil and gas applied reservoir engineering course is for individuals seeking comprehensive applied petroleum reservoir engineering knowledge. The applied reservoir engineering training provides a solid understanding of practical methods used in reservoir engineering to maximize hydrocarbon recovery.

The curriculum encompasses the various aspects related to reservoir engineering throughout the reservoir life cycle, including primary recovery and advanced techniques like enhanced oil recovery. Key topics in this course also include reservoir simulation and enhanced oil recovery modeling, emphasizing Craft-applied petroleum reservoir engineering principles and practices.

Targeted Groups:

- This oil and gas applied reservoir engineering course is for reservoir and production engineers seeking advanced knowledge in applied reservoir engineering.
- It's suitable for field development, reservoir management, and hydrocarbon recovery optimization professionals.
- This oil and gas applied reservoir engineering course is for individuals with backgrounds in engineering, geology, or related fields.
- It's beneficial for both early-career and experienced professionals looking to enhance their reservoir characterization, simulation, and management skills.
- This oil and gas applied reservoir engineering course is for those in exploration and production companies, consulting firms, and governmental agencies within the oil and gas sector.
- Relevant for individuals assessing reserves, forecasting production, and analyzing reservoir performance.
- It's useful for enhanced oil recovery EOR techniques and reservoir simulation modeling professionals.
- Valuable for those interested in the latest advancements and technologies in reservoir engineering for efficient hydrocarbon extraction.

Course Objectives:

By the end of this dynamic applied reservoir engineering course, participants will be able to:

- Distinguish among different hydrocarbon recovery mechanisms.
- Calculate oil in place through multiple estimation techniques.
- Analyze well-test data and assess inflow performance.
- Gain insights into the complexities of PetroSkills applied reservoir engineering simulations.
- Explore primary, secondary, and tertiary recovery methods.
- Utilize material balance and volumetric methods for reserves estimation.
- Interpret pressure transient analysis results for reservoir characterization.
- Evaluate reservoir performance through decline curve analysis.
- Optimize production strategies based on reservoir simulation outcomes.
- Implement water flooding and gas injection techniques for enhanced recovery.
- Address challenges related to reservoir heterogeneity and fluid behavior.
- Incorporate uncertainty analysis in reservoir management decisions.
- Apply industry-standard software for reservoir engineering tasks.
- Navigate regulatory requirements and environmental considerations in reservoir operations.

Targeted Competencies:

By the end of this dynamic applied reservoir engineering training, target competencies will be able to:

- Master reservoir characterization techniques.
- Proficiency in reservoir simulation and modeling.
- Advanced understanding of reservoir fluid behavior and properties.
- Expertise in well-testing and production data analysis.
- Competence in reservoir performance evaluation and optimization.
- Skill in reservoir management and field development planning.
- Familiar with enhanced oil recovery EOR methods.
- Know geostatistics and uncertainty analysis in reservoir engineering.
- Ability to apply industry software for reservoir engineering tasks.
- Understand environmental and regulatory considerations in reservoir operations.

Course Content:

Unit 1: Reservoir Engineering Fundamentals

- The Reservoir Life Cycle and its significance in oil and gas reservoir engineering.
- Understand different Reservoir Drive Mechanisms.
- Delve into the Reservoir Ultimate Recovery Factor.
- Study the role of Wettability & Relative Permeability in recovery processes.
- Explore the impact of Capillary Pressure on hydrocarbon movement.
- Investigate the Reservoir Fluid Properties and how they affect recovery.
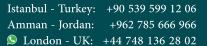
Unit 2: Oil Recovery Methods:

- Implementing Primary Recovery techniques and their application to applied reservoir engineering.
- Strategies for Secondary Recovery.
- Flooding Patterns.
- Factors Affecting Water Flooding.
- Analyze the Factors Affecting Water Flooding Efficiency.
- Apply petroleum reservoir engineering craft.
- Understand enhanced oil recovery techniques.

Unit 3: Original Hydrocarbon in Place Determination

- Usage of the Volumetric Method.
- The Material Balance approach and its practical application.
- Work through practical Examples and case studies.
- The importance of Decline Curve Analysis in applied reservoir engineering petroskills.

Unit 4: Well Testing and Inflow Performance:

- Oil and Gas Well Testing:
  - Define oil and gas Well Test Objectives and their critical role in applied reservoir engineering craft.
  - Understand Test Input/output Data.
  - Classify Types of oil and gas Well Tests.
  - Analyze data using the Diffusivity Equation.
  - Derivative Analysis.
- Inflow Performance:
  - The goal of Nodal Analysis is to improve oil and gas well performance.
  - The Impact of Production System Pressure Losses.
  - Implementing the Nodal Analysis Approach in real-world applications.
  - Construct Inflow/Outflow Curves for performance optimization.
  - Case Studies on Applications of Nodal Analysis in Applied Petroleum Reservoir Engineering.

Day 5: Introduction to Reservoir Simulation:

- The Reservoir Simulation Concept and its relevance in applied reservoir engineering.
- Different Types of Simulators.
- Understand the Reservoir Simulation Model and its components.
- Discuss Input Data Required for successful simulation.
- Outline the Steps to Run the Simulation Model effectively.

Conclusion:

This oil and gas applied reservoir engineering course provides practical skills and theoretical knowledge for oil and gas industry engineers. Participants will gain an in-depth understanding of the advanced techniques used in reservoir engineering, including state-of-the-art software and best practices, aligning with the leading applied petroleum reservoir engineering PetroSkills frameworks.

MERCURY

Registration form on the :
Applied Reservoir Engineering Course

code: 15124 **From:** 21 - 25 Oct 2024 **Venue:** Barcelona (Spain) **Fees:** 5500 **Euro**

Complete & Mail or fax to Mercury Training Center at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng):
....
Position:
....
Telephone / Mobile:
....
Personal E-Mail:
....
Official E-Mail:
....

Company Information

Company Name:
....
Address:
....
City / Country:
....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
....
Position:
....
Telephone / Mobile:
....
Personal E-Mail:
....
Official E-Mail:
....

Payment Method

☐ Please invoice me

☐ Please invoice my company