

## Reservoir Engineering Fundamentals

*Kuala Lumpur (Malaysia)*

*14 - 25 April 2025*

UK Traininig

# PARTNER



# Reservoir Engineering Fundamentals

Code: OG28 From: 14 - 25 April 2025 City: Kuala Lumpur (Malaysia) Fees: 8300 Pound

## Introduction

Welcome to the Advanced Reservoir Engineering Fundamentals course! This intensive program is designed to provide you with a comprehensive understanding of modern reservoir engineering principles and practices. As technology evolves and reservoirs become increasingly complex, it is crucial for reservoir engineers to stay updated with the latest advancements in the field. This course aims to equip you with the knowledge and skills necessary to tackle contemporary challenges in reservoir engineering and to excel in advanced reservoir engineering practices.

## Course Objectives

- Understand the fundamental concepts of reservoir engineering, including fluid flow in porous media, reservoir rock properties, and fluid behavior.
- Explore advanced reservoir characterization techniques, such as geostatistics, petrophysics, and seismic interpretation, to optimize reservoir development strategies.
- Gain proficiency in reservoir simulation software and learn how to use it effectively for reservoir performance prediction, history matching, and optimization.
- Analyze different enhanced oil recovery EOR methods, including gas injection, water flooding, chemical flooding, and thermal recovery, to maximize hydrocarbon recovery from reservoirs.
- Develop skills in reservoir management, including reservoir surveillance, production forecasting, and reserve estimation, to optimize field development plans and maximize economic returns.
- Learn about emerging trends and technologies in reservoir engineering, such as machine learning, data analytics, and digital oilfield initiatives, and their applications in reservoir management.

## Course Outlines

### Day 1: Introduction to Reservoir Engineering

- Overview of reservoir engineering principles
- Properties of reservoir fluids
- Basics of fluid flow in porous media

### Day 2: Reservoir Rock Properties

- Types of reservoir rocks
- Porosity and permeability
- Capillary pressure and wettability

### Day 3: Reservoir Characterization

UK Training  
**PARTNER**



- Geostatistical methods for reservoir characterization
- Petrophysical analysis techniques
- Seismic interpretation for reservoir characterization

#### Day 4: Reservoir Simulation Fundamentals

- Introduction to reservoir simulation software
- Building and history-matching reservoir models
- Sensitivity analysis and uncertainty quantification

#### Day 5: Advanced Reservoir Simulation Techniques

- Compositional and black-oil reservoir simulation
- Fluid flow phenomena in complex reservoirs
- Upscaling techniques for large-scale simulations

#### Day 6: Enhanced Oil Recovery EOR Methods

- Overview of EOR techniques
- Gas injection methods CO<sub>2</sub> and nitrogen
- Water flooding and chemical flooding
- Thermal recovery techniques steam and in-situ combustion

#### Day 7: Reservoir Management

- Reservoir surveillance and data acquisition
- Production forecasting techniques
- Reserves estimation and reporting

#### Day 8: Integrated Reservoir Management

- Integrated asset modeling
- Field development optimization
- Decision-making under uncertainty

#### Day 9: Emerging Trends in Reservoir Engineering

- Applications of machine learning and artificial intelligence in reservoir engineering
- Digital oilfield technologies
- Advanced data analytics for reservoir management

#### Day 10: Case Studies and Practical Applications

- Real-world case studies illustrating the application of reservoir engineering principles
- Hands-on exercises using reservoir simulation software
- Group discussions and presentations on contemporary reservoir engineering challenges

#### Conclusion



By the end of this course, participants will have gained an advanced understanding of reservoir engineering principles and practices. They will be equipped with practical knowledge in the design, simulation, and management of reservoir systems. Participants will also be able to leverage the latest technologies and techniques to optimize reservoir development and maximize hydrocarbon recovery. Whether you are a reservoir engineering technician, principal reservoir engineer, or a reservoir engineer intern, this course will provide you with the necessary skills and insights to excel in the dynamic and evolving field of reservoir engineering.





# Blackbird Training Cities

## Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Anney (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)  
(Netherlands)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich (Switzerland)



Manchester (UK)



Milan (Italy)



# Blackbird Training Cities

## USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

## Africa



Baku (Azerbaijan)  
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney (Australia)



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Pulau Ujong (Singapore)



Jakarta (Indonesia)



Amman (Jordan)



Beirut (Lebanon)





## Blackbird Training Cities

### Asia



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



## Blackbird Training Clients



UK Training  
**PARTNER**





## Blackbird Training Categories

### Management & Admin

Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Elevation

### Technical Courses

Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training



**BLACKBIRD**  
FOR TRAINING



International House 185 Tower Bridge  
Road London SE1 2UF United Kingdom



+44 7401 1773 35  
+44 7480 775526



Sales@blackbird-training.com



www.blackbird-training.com

UK Training

**PARTNER**

