

AI-Driven Reservoir Simulation and Production Forecasting

COURSE OVERVIEW

This course gives an introduction to integrating artificial intelligence techniques with traditional reservoir engineering and simulation practices. It bridges the gap between conventional simulation workflows and advanced AI methodologies, offering both theoretical foundations and practical case studies to illustrate real-world applications. Participants will explore how machine learning, deep learning, and data-driven modeling can enhance reservoir characterization, optimize production strategies, and improve forecasting accuracy.

WHO SHOULD ATTEND?

This course is designed for reservoir engineers, petroleum engineers, data scientists, and energy professionals seeking to enhance their skills at the intersection of AI and reservoir simulation. It is also highly relevant for researchers, and decision-makers in the oil and gas sector who want to leverage AI-driven insights for improved reservoir management and production forecasting. A basic understanding of reservoir engineering principles and data analytics is recommended but not mandatory.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the role of AI in reservoir simulation and forecasting.
- Apply machine learning and deep learning techniques to reservoir modeling.
- Integrate AI workflows with traditional simulation methods to enhance accuracy and efficiency.
- Perform data-driven production forecasting and uncertainty quantification.
- Evaluate and implement AI-driven tools for improved reservoir management and decision-making.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Foundations of AI and machine learning in reservoir engineering.
- Hybrid approaches combining physics-based models with AI-driven models.
- Hands-on exercises using real-world reservoir and production datasets.
- Case studies demonstrating successful AI applications in the energy sector.
- Practical insights on deploying AI tools for production optimization and forecasting.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded