GTC International Consulting Limited
Riverbank House
1 Putney Bridge Approach
Fulham, London, SW6 3BQ
T: +44(0)2037055710
E:enquiries@thegtcgroup.com
W: www.thegtcgroup.com

AI-Driven Production Forecasting and Decline Curve Analysis

COURSE OVERVIEW

This course introduces participants to how artificial intelligence can enhance traditional reservoir engineering, focusing on combining conventional decline curve analysis (DCA) with advanced AI and machine learning techniques. It covers the basics of DCA, AI algorithm applications for forecasting production, data preparation, and model training, along with the use of hybrid models to boost forecasting precision and dependability. Through this course, participants will gain practical skills to apply AI-driven methods for more accurate production predictions, improve decision-making in reservoir management, and harness modern data analytics to optimize oil and gas operations.

WHO SHOULD ATTEND?

This course is designed for petroleum engineers, reservoir engineers, production engineers, data scientists working in the energy sector, and technical managers seeking to leverage AI in upstream oil and gas operations. It is also suitable for early-career professionals aiming to strengthen their understanding of both traditional decline curve methodologies and cutting-edge AI applications in production forecasting.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the principles and applications of decline curve analysis for production forecasting.
- Apply machine learning and AI models to enhance prediction accuracy.
- Integrate domain knowledge with data-driven approaches for robust forecasting.
- Evaluate, validate, and compare AI-based forecasts with traditional methods.
- Utilize AI tools to support reservoir management and production optimization decisions.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Comprehensive coverage of traditional DCA and AI-based forecasting.
- Hands-on exercises with real-world production datasets.
- Practical guidance on data preparation, feature engineering, and model evaluation.
- Insights into hybrid approaches that combine physics-based and AI methods.
- Case studies demonstrating successful implementation in upstream operations.

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