

# Performance Analysis, Prediction and Optimization using NODAL Analysis

## **DISCIPLINE**

Production &  
Operations

## **COURSE DURATION**

5 Days

## **DELIVERY METHOD**

In-house

## **COURSE DESCRIPTION**

The course focuses on the theoretical and applied aspects of well performance modeling. The course also provides an insightful look at inflow and outflow performance relationships in horizontal, vertical and inclined wells. The participant will be able to apply the gained knowledge to design well completions and artificial lift systems, validate production/ injection data, diagnose well performance issues and more. The course is concluded with a filed case study where the participants will design a multi-well injection system using real data and diagnose its injection deficiency, and propose feasible solutions.

## **COURSE CONTENTS**

- Introduction to Production/ Injection Systems
- Inflow Performance Relationship (IPR)
- Outflow Performance Relationship (OPR)
- Multi-phase Flow in Pipes
- Integrated Production Systems Analysis (NODAL Analysis)
- Smart well completions modeling and optimization
- Applications of well performance:
  - ✓ Well completion design
  - ✓ Gas Lift design
  - ✓ Electrical Submersible Pumps (ESP) design
  - ✓ Dead or low performing wells diagnostics
  - ✓ Prediction of reservoir parameters from surface data
  - ✓ Production data validation
- Course Project; field case study to model and diagnose the injection deficiency in a water disposal system

## **CONTACT US**

[info@HandATraining.com](mailto:info@HandATraining.com)

+1 (832) 426 2494

[www.handatraining.com](http://www.handatraining.com)

[www.linkedin.com/company/  
ha-professional-development-advisory/](http://www.linkedin.com/company/ha-professional-development-advisory/)