



Oil, Gas and Chemical

Drilling Optimization & Well Planning

Course Introduction

Drilling is essential and expensive part of the oil and gas industry.

Improving the drilling operation carries the greatest interest by the oil and gas operating companies.

The oil and gas drilling industry is changing rapidly in the areas of technology, safety, environment, management, contractual relationships training,. Drilling operations must confront solve extremely difficult technical, safety and control problems. This course is designed to provide participants with an up-to-date overview of the practical applications of oil and gas drilling techniques. The course covers drilling programming well control planning. Type of drilling (deviated, horizontal and multilateral) drill bit selection and hydraulics, drilling fluid program, casing and cement operations, well control operations, drilling problems & solving, well completion and reporting procedures.

Target Audience

- Process design
- Unit Operator
- Environmental
- Process safety engineer
- Gasoline blender engineer
- Lab supervisor
- Supply chain engineer
- Distillates analyst
- Models engineer
- Chemical Operator
- Chemical Plant Operator
- Chemical Process Technician
- Control Room Supervisor

- Gas Plant Process Operator
- Gas Production Operator
- Gas Terminal Operations and Storage
- Gathering Pipeline engineer
- Oil Terminal / Storage engineer
- Pipeline Maintenance / Equipment / Compliance / Repair
- Pipeline Testing / Technician / Supervisor / Safety
- Plant Equipment Operator
- Plant Operations Technician
- Plant Shutdown
- Plant Supervisor
- Power Distribution
- Power Plant Manager
- Process Supervisor
- Refinery Operations Technician / Manager
- Terminal Operator / Manager
- Utilities Operator

Learning Objectives

- Review drilling data and plan the well from spud to production phase.
- Well design and optimize drilling & work over schedule
- Incorporate the completion plans into the drilling plan
- Drill a well cost effectively and maximize penetration rate.
- Evaluate stuck pipe problem and avoid potential problems
- Evaluate and maintain drilling fluids
- Optimize hole cleaning
- Design casing, drill string and BOP/Wellheads
- Evaluate and implement cementing programs
- Design and implement bit and hydraulics programs.
- Incorporate directional drilling and deviation control
- Recognize and evaluate well control problems
- Production system optimization.

Course Outline

- **01 Day One**

- Module 01 Overall Drilling Process:-**

- 1.1 Introduction
 - 1.2 Types of rigs
 - 1.3 Rig equipment
 - 1.4 Methods of drilling
 - 1.5 Well proposal & design
 - 1.6 Well drilling program
 - 1.7 Video film CD-DVD (How to drill)

- **02 Day Two**

- Module 02 Well planning and operations:**

- 2.1 Making Hole & Bit Selection
 - 2.2 Drilling Fluids (Mud types)
 - 2.3 Casing design
 - 2.4 Casing Operation
 - 2.5 Cement design
 - 2.6 Cementing Operation
 - 2.7 Case study

- **03 Day Three**

- Module 03 Drilling Engineering**

- 3.1 Type of wells
 - 3.2 Design Deviation , Horizontal and Multilateral Wells

- 3.3 Optimize drilling and work over operations
- **04 Day Four**

3.1 Well completion

- 3.2 Well testing and set up well on production
- 3.3 Production system optimization
- **05 Day Five**

Module 04 Hole Problems & Prevention:

- 4.1 Lost Circulation
- 4.2 Stuck Pipe
- 4.3 Kick & well control
- 4.4 Shale problems
- 4.5 Fishing
- 4.6 Problems and Practical Exercises

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 7, 2025	April 11, 2025	5 days	4250.00 \$	UAE - Abu Dhabi
July 7, 2025	July 11, 2025	5 days	4250.00 \$	UAE - Dubai
Oct. 27, 2025	Oct. 31, 2025	5 days	4950.00 \$	Netherlands - Amsterdam
Jan. 27, 2025	Jan. 31, 2025	5 days	4250.00 \$	UAE - Dubai

FROM	TO	DURATION	FEES	LOCATION
Nov. 16, 2025	Nov. 20, 2025	5 days	4250.00 \$	Oman - Muscat