

OIL WELL DRILLING OPERATION COURSE

Course Duration	Location	Course Delivery
5 days	Lagos Nigeria	Class Room

Course Fee: \$1,000

COURSE DESCRIPTION

This course covers aspect of drilling processes both on land and offshore, from exploration to well completion. It take students through important topics like the Drake's Well, exploration techniques used in the search for oil, well drilling equipment, routine drilling operations, well completion procedures, drill bits, formation evaluation techniques and other well problems like kicks and blowouts.

Course Pre-requisites

This course is designed for entry level personnel, young drilling engineers, both field and administrative staff of Drilling related service Companies. Also Supervisors, Drill Masters, and Drilling Engineers with field experience. The course is intended to include both field, office based personnel and anyone who wants an overview of Drilling Operations. Students should bring a Laptop with Microsoft office and PDF version installed. Students must be prepared for 1 hour of homework every night.

Upon Completion of this course, Students will be awarded certificate of completion from University of Texas at Austin USA.

Course Outline

Part A- Introduction

Part B-History

The Drake Well,
California, Late
The Lucas Well,
The Middle East

Part C-Cable-Tools and Rotary Drilling

Cable-Tool Drilling
Rotary Drilling
Rotating Systems

Fluid Circulation

Part D-Rotary Rig Types

Land Rigs

Mobile Offshore Rigs

Bottom-Supported MODUs

Floating Units

Part E-People and Companies

Operating Companies

Drilling Contractors

Drilling Contracts

Service and Supply Companies

People

Drilling Crews

Drilling Crew Work Shifts

Crew Safety

Other Rig Workers

Part F-Oil and Gas: Characteristics and Occurrence

Natural Gas

Liquefied Natural Gas (LNG)

Liquefied Petroleum Gas (LPG)

Natural Gas Liquid (NGL)

Crude Oil

Refined Hydrocarbons

Oil and Gas Reservoirs

Characteristics of Reservoir Rocks

Origin and Accumulation of Oil and Gas

Petroleum Traps

Types of Wells

Part G-The Drill Site

Choosing the Site

Preparing the Site

Surface Preparation

Earthen Pits

Cellars

Rathole

Mousehole

Conductor Hole

Moving Equipment to the Site

Moving Land Rigs

Moving and Setting Up Offshore Rigs

Part H-Rigging Up

Substructures

The Drawworks

Raising the Mast or Derrick

Derrick and Mast Heights

Mast Load Ratings

Rigging Up Additional Equipment

Offshore Rig-Up

Part I-Rig Components

Power System

Mechanical Power Transmission

Electrical Power Transmission

Hoisting System

The Drawworks

The Catheads

The Blocks and Drilling Line

Mast and Derricks

Rotating Systems

Rotary-Table

Circulating Equipment

Part J- Normal Drilling Operations

Drilling the Surface Hole

Tripping Out with a Kelly System

Tripping Out with a Top-Drive Unit

Tripping Out with a Pipe Raker

Running Surface Casing

Cementing

Tripping In

Drilling Ahead

Part K-Formation Evaluations

Examining Cuttings and Drilling Mud

Well Logging

Drill Stem Testing

Coring

Part L-Completing the Well

Plugging and Abandoning a Well

Completing a Producing Well

Production Tubing

Perforating

Well Testing and Treating



Acidizing

Fracturing

Gravel Packing

Part M-Special Operations

Directional Drilling

Slide Drilling with a Motor

Rotary Steerable Assemblies

Fishing

Well Control

Part N-Rig Safety and Environmental Concerns