



INTRODUCTION TO DRILLING TECHNOLOGY



COURSE OVERVIEW

This introductory course provides participants with a comprehensive understanding of the fundamental principles and practices involved in oil and gas drilling operations. It covers the key concepts of drilling engineering, well planning, rig types and equipment, drilling fluids, well control, and basic well construction. Designed for those new to the industry or professionals from non-drilling backgrounds, the course delivers practical knowledge that enables participants to contribute effectively in multidisciplinary oilfield teams and better understand drilling operations from planning to execution.

DATES, VENUES AND FEES



19 – 23 October 2025 - Dubai

(5 Days)

Fees

US\$ 5000

Note: Fee is per participant + 5% VAT (if applicable).
Groups from the same company can enjoy a **discounted** price.

WHO SHOULD ATTEND?

This course is appropriate for a wide range of professionals but not limited to:

- Entry-level engineers and technical staff in drilling, completions, reservoir, and production disciplines
- Geologists, geophysicists, petrophysicists, and other subsurface professionals
- Field operators, technicians, and service company personnel
- Health, Safety & Environment (HSE) professionals working in drilling operations
- Project managers, planners, procurement, and logistics staff supporting drilling operations
- Anyone seeking foundational knowledge in drilling technology

CONTACT US NOW

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ACCREDITATION



This training course is certified by CPD.

The CPD Certification Service is the leading independent CPD accreditation institution operating across industry sectors to complement the Continuing Professional Development policies of professional institutes and academic bodies. The CPD Certification Service provides support, advice, and recognised independent CPD accreditation compatible with global CPD principles. CPD is the term used to describe the learning activities professionals engage in to develop and enhance their abilities and keep skills and knowledge up to date. CPD Units are only awarded to programmes after each programme is scrutinised to ensure integrity and quality according to CPD standards and benchmarks.

COURSE CERTIFICATE

MSTC certificate will be issued to all attendees completing a minimum of 80% of the total tuition hours of the course.

CPD internationally recognized certificate will be issued for all participants who will meet the course requirements. CPD certificates will be issued within a month of the successful completion of the course.

TRAINING METHODOLOGY

- Expert-led sessions with dynamic visual aids
- Comprehensive course manual to support practical application and reinforcement
- Interactive discussions addressing participants' real-world projects and challenges
- Insightful case studies and proven best practices to enhance learning

LEARNING OBJECTIVES

By the end of this course, participants should be able to:

- Understand the overall process of drilling a well from spud to completion.
- Identify the major components and functions of drilling rigs and downhole tools.
- Recognize different types of drilling methods and their applications.
- Explain the roles of drilling fluids and cementing in well integrity.
- Understand the principles of well control and how kicks are prevented and managed.
- Describe common drilling challenges and how they are addressed in the field.
- Appreciate the importance of health, safety, and environmental (HSE) considerations in drilling.

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COURSE OUTLINE

DAY 1

Introduction to Drilling and the Oil & Gas Industry

- Pre test
- Overview of the upstream oil and gas industry
- Purpose and phases of well drilling
- Types of wells: vertical, directional, horizontal
- Land vs. offshore drilling environments
- Overview of well planning and drilling workflow

DAY 2

Drilling Rigs and Equipment

- Classification of drilling rigs (land, jack-up, semi-sub, drillship)
- Rig systems: hoisting, rotating, circulating, and power systems
- Drill string components: drill pipe, collars, stabilizers
- Overview of drill bits and bit selection
- Rig site layout and safety zones

DAY 3

Drilling Fluids and Cementing

- Functions and types of drilling fluids (water-based, oil-based)
- Mud properties and maintenance
- Solids control equipment and operations
- Cementing operations: primary and secondary
- Cement slurry design and displacement

DAY 4

Directional Drilling and Well Control

- Introduction to directional drilling and downhole surveying
- Deflection tools: mud motors, rotary steerable systems
- Basic trajectory design concepts
- Kick detection and well control basics
- Blowout preventers (BOPs) and shut-in procedures

DAY 5

Drilling Hazards, HSE, and Emerging Technologies

- Common drilling problems: stuck pipe, lost circulation, kicks
- HSE in drilling operations: risk management and permits to work
- Overview of drilling performance improvement techniques
- Digital transformation in drilling: real-time monitoring, automation
- Course review, Q&A session, and Post test

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