



DE197: Directional Drilling and Surveying



Training Description:

The goal of this intensive training course is for the participants to understand the operations carried out by directional drillers. They will also learn how to contribute to the design of directional and horizontal wells. The course will cover the fundamentals, design considerations, and operational aspects of directional and horizontal drilling.

Training Objectives:

By the end of the training, participants will feel confident by understanding the:

- ✓ Directional surveying
- ✓ Well location calculation methods
- ✓ Deflection methods
- ✓ Anti-collision concepts
- ✓ LWD and mudlogging use in directional drilling
- ✓ Bottomhole assemblies and drill string tools used in directional drilling
- ✓ Concepts of torque and drag and shocks and vibrations
- ✓ Introduction to multilaterals
- ✓ Directional drilling problems

Training Designed for:

This course is intended for Drilling Engineers, Drilling Supervisors, Trainee Directional Drillers, and service company personnel with basic drilling engineering skills.

Prerequisites:

All participants should have some basic drilling engineering experience and one to three years of wellsite experience. Prior exposure to directional drilling is recommended, but not required. Good mathematic skills will be necessary, particularly trigonometry.

Training Requirement:

"Hand's on practical sessions, equipment and software" will be applied during the course if required and as per the client's request." (This hands-on, highly-interactive training includes simulator, real-life case studies and exercises).

This training course is available upon request in English or Arabic. Content, location and duration can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Directional Drilling Fundamentals and Terminology
 - Fundamentals, applications, and limitations





- Terminology, well objectives, and target issues
- Well planning: positioning and coordinate systems

DAY TWO:

❖ **Surveying and Advanced Well Planning**

- Survey calculation methods
- Anti-collision and well planning
- Surveying tools
- MWD, LWD and mudlogging

DAY THREE:

❖ **Downhole Equipment**

- Drilling tools and deflection methods
- Drilling motors overview
- BHA design
- Rotary steerable systems

DAY FOUR:

❖ **Well Planning and Path Design**

- Directional well path design
- Horizontal well planning and calculations
- Horizontal drilling planning
- Drill string design
- Torque, drag, shocks and vibrations

DAY FIVE:

❖ **Hole Cleaning and Wellbore Stability**

- Hole cleaning
- Well bore stability
- Introduction to multilateral wells
- Geosteering
- Directional drilling problems and solutions

❖ **Course Conclusion**

❖ **POST-TEST and EVALUATION**

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.





Training Fees:

As per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Actual Face to Face Daily Timing:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break/Lunch)
13:30 - 14:00	Last Session

Virtual Online Live Training Daily Timing:

08:00 - 10:00	First Session
10:00 - 10:20	Recess
10:20 - 12:20	Second Session
12:20 - 12:40	Recess (Prayer Break)
12:40 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

aisha@cmc-me.com / training@cmc-me.com

Tel.: +971 2 665 3945 / 643 6653 | Mob.: +971 52 2954615

Training & Career Development Department

