TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000061

OFFS003 - Deepwater Well Construction and Engineering

Technology solutions enable efficiencies and change the game for both onshore and offshore producers.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

Technology solutions enable efficiencies and change the game for both onshore and offshore producers. One of the challenges operators face is leveraging value from the operational data and experience they already have collected - albeit spread inconsistently across multiple business functions. They then need to fill the gaps in their understanding about the real state of operations. Organizations are often constrained by the tools and practices they can use to extract practical insight and decision support. Lacking the means to translate data into useful information limits the ability for organizations to use risk as an indicator to support improved, proactive operational decision-making.

Modern offshore production systems are highly sophisticated and use advanced technologies, well beyond even those envisaged by anyone in the early days of subsea development. This use of advanced technologies and the mass of strategic knowledge that has been built up has accelerated the development of deepwater fields around the world.

This five-days course has been specially developed to provide a broad but in-depth overview of the sector and shares useful insights into the state of the art in offshore engineering & technology. It will cover aspects of how offshore fields are developed, and how offshore systems are designed, installed, operated and decommissioned.

Who it is for and how it helps

Personnel employed, engaged, or associated in a drilling/geological operational or organizational support functions. Anyone from drilling secretarial, technical, finance, HSE, logistics support, to Drilling, Geology, Geo-Science, Drilling Contractor and/or all 3rd party support functions, and any team leader, supervisor, or management function.

What you will learn

- Recognise and analyse the difficulties, challenges, problems, and opportunities presented in Deepwater well engineering/operations as drilled in increasingly difficult down-hole, geological, and environmental conditions.
- Maximise Deepwater drilling engineering, safety, and operational efficiency using proven and adaptive best managed, controlled, and practical solutions.
- Minimise operating loss, waste, cost, and risks in potentially highly capital intensive and potentially complex and difficult Deepwater wells.
- Examine and critique Deepwater drilling engineering case studies, well failures and successes drilled in various Deepwater regions of the world (e.g. UK/Norway, Gulf of Mexico, West Africa, India, SE Asia, North and South Atlantic basins).
- Allow participants to become familiar with how to plan, organise, implement, and control Deepwater project from a well’s basis of design. Work through well planning and engineering, outlining

Course overview — continued

conventional and non-conventional drilling design, engineering and operational management strategy, and control approaches.

Curriculum

Modules 01–04

01 Introduction to Subsea Drilling Systems

- Introduction to Deepwater well design and Construction
- Deepwater history and justification
- Identifying and recognising deepwater hazards
- Risk management
- Loss control management
- Performance delivery and project planning

02 Equipment

- Rig selection, design and engineering requirements
- Marine systems requirements and design. Mooring station keeping risers and wellheads.
- Riser and Conductor design
- Drilling equipment systems management, design and engineering requirements.
- Subsea systems design and management.
- Wellhead and BOP systems management and design.

03 Well operations planning and construction

- Deepwater geology and drilling environment
- Fundamental deepwater drilling engineering
- Well engineering riserless drilling operations
- Delivering open water operations
- Deepwater drilling fluids programme requirements
- Cementing fluids programme and design

04 Deepwater drilling and completions

- Deepwater operations planning
- Pore pressure, ECD and wellbore stability techniques
- Wellbore stability and pore pressure management
- Deepwater hydraulics and hole cleaning
- Contingency management and problem prediction

Curriculum

Modules 04–05 · Module 04 — continued

- Designing and engineering for deepwater development drilling, completions, well testing and abandonment

05 Well control

- Deepwater well control management
- Deepwater well control procedures
- Deepwater emergency response and contingency planning
- Revision of case studies

Joining the programme

Contact the Academy and quote course code 000061 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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