

COURSE OVERVIEW DE1028 Well Design

Course Title

Well Design

Course Date/Venue

Please see page 3

Course Reference

DE1028

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.



This course is designed to provide participants with a detailed and up-to-date overview of well design, construction and engineering. It covers the drilling operations, exploration and production licenses, drilling personnel and rotary drilling equipment; the drilling process onshore and offshore, drilling economics, rig components, drillstring and drilling bits; the design of PDC and roller cone bits, selection of bits, grading of dull bits, assessing and improving the performance of drill bits; and the formation pressures and well control.



Further, the course will also discuss the origin and representation of pore pressures and fracture pressures, formation fracture pressures, well control, warning signs of kicks, well killing procedures, BOP equipment and BOP stack arrangements; the drilling fluids, hydraulics and casing; the functions, properties, design and selection of various types of drilling fluid; and the wellsite tests performed on drilling fluids, design of a solids control system and pressure losses in the drilling system.

During this interactive course, participants will learn the optimization of bit hydraulics; the major functions and properties of casing and casing string configurations; the casing running operations, casing design process and cementing and directional drilling; the functions and properties of cement and single and multiple stage cementing operations; assessing the quality of the cement sheath functions; the directional drilling, designing the trajectory for a directional well and directional drilling tools and BHAs; the wellbore surveying and calculating the trajectory of a directional well based on survey data; the measurement while drilling and subsea drilling, MWD and the value of real time data, MWD data collection and transmission techniques; and the tools equipment used to drill from a floating drilling rig.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain in-depth knowledge on well design, construction and engineering
- Discuss drilling operations, exploration and production licenses, drilling personnel and rotary drilling equipment
- Explain the drilling process onshore and offshore, drilling economics, rig components, drillstring and drilling bits
- Discuss the design of PDC and roller cone bits, selection of bits, grading of dull bits and performance of drill bits
- Illustrate formation pressures and well control and explain the origin and representation of pore pressures and fracture pressures
- Discuss abnormal pressures, formation fracture pressures, well control, warning signs of kicks, well killing procedures, BOP equipment and BOP stack arrangements
- Explain drilling fluids, hydraulics and casing including the functions, properties, design and selection of various types of drilling fluid
- Evaluate wellsite tests performed on drilling fluids, design of a solids control system and pressure losses in the drilling system
- Optimize bit hydraulics and identify the major functions and properties of casing and casing string configurations
- Illustrate casing running operations, casing design process and cementing and directional drilling
- Recognize the functions and properties of cement including single and multiple stage cementing operations
- Assess the quality of the cement sheath, discuss directional drilling and design the trajectory for a directional well
- Identify directional drilling tools and BHAs, apply wellbore surveying and calculating trajectory of a directional well based on survey data
- Discuss measurement while drilling and subsea drilling, MWD and the value of real time data
- Employ MWD data collection and transmission techniques and recognize the tools and equipment used to drill from a floating drilling rig

Exclusive Smart Training Kit - H-STK®



*Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of well design, construction and engineering for drilling engineers, trainee drilling engineers, petroleum engineers and specialist service company engineers.

Course Date/Venue

Session(s)	Date	Venue
1	April 19-23, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
2	June 21-25, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
3	August 09-13, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
4	October 11-15, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
5	December 20-24, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
6	January 24-28, 2027	Meeting Plus 9, City Centre Rotana, Doha Qatar
7	March 21-25, 2027	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt

Course Fee

Doha	US\$ 8,500 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
London	US\$ 8,800 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Istanbul	US\$ 8,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Seville	US\$ 8,800 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	US\$ 8,000 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Cairo	US\$ 8,000 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.



Course Certificate(s)


Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

-  British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

-  The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.





Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Stan Constantino, MSc, BSc, is a **Senior Petroleum & Reservoir Engineer** with over **30 years of Offshore & Onshore** extensive experience within the **Oil, Gas & Petroleum** industries. His area of expertise include **Reserves & Resources, Reserves Estimation & Uncertainty, Reservoir Characterization, Unconventional Resource & Reserves Evaluation, Oil & Gas Reserves Estimation, Methods for Aggregation of Reserves & Resources, Fractured Reservoir Classification & Evaluation, Sequence Stratigraphy, Petrophysics & Rock Properties, Seismic Technology, Geological Modelling, Water Saturation, Crude Oil & Natural Gas Demand, Exploration Agreements & Financial Modelling, Seismic Survey Evaluation, Exploration Well Identification, Field Production Operation,**

Field Development Evaluation, Crude Oil Marketing, Core & Log Data Integration, Core Logging, Advanced Core & Log Integration, Well Logs & Core Analysis, Advanced Petrophysics/Interpretation of Cased Hole Logs, Cased Hole Formation Evaluation, Cased Hole Formation Evaluation, Cased Hole Evaluation, Cased-Hole Logging, Applied Production Logging & Cased Hole & Production Log Evaluation, Cased Hole Logging & Formation Evaluation, Open & Cased Hole Logging, Screening of Oil Reservoirs for Enhanced Oil Recovery, Enhanced Oil Recovery, Enhanced Oil Recovery Techniques, Petroleum Economic Analysis, Oil Industry Orientation, Oil Production & Refining, Crude Oil Market, Global Oil Supply & Demand, Global Oil Reserves, Crude Oil Types & Specifications, Oil Processing, Oil Transportation-Methods, Oil & Gas Exploration and Methods, Oil & Gas Extraction, Technology Usage in Industrial Security; Upstream, Midstream & Downstream Operations; Oil Reservoir Evaluation & Estimation, Oil Supply & Demand, Oil Contracts, Government Legislation & Oil Contractual Agreements, Oil Projects & Their Feasibility (revenue and profitability), Water Flooding, Reservoir Souring & Water Breakthrough, Reservoir Performance Using Classical Methods, Fractured Reservoir Evaluation & Management, Reservoir Surveillance & Management, Reservoir Engineering & Simulation, Reservoir Monitoring, Pressure Transient Testing & Reservoir Performance Evaluation, Reservoir Characterization, Reservoir Engineering Applications with ESP and Heavy Oil, Reservoir Volumetrics, Water Drive Reservoir, Reserve Evaluation, Rock & Fluid Properties, Fluid Flow Mechanics, PVT Analysis, Material Balance, Darcy's Law & Applications, Radial Flow, Gas Well Testing, Natural Water Influx, EOR Methods, Directional Drilling, Drilling Production & Operations, Field Development & Production of Oil & Gas, Wireline Logging, Mud Logging, Cased Hole Logging, Production Logging, Slick Line, Coil Tubing, Exploration Wells Evaluation, Horizontal Wells, Well Surveillance, Well Testing, Design & Analysis, Well Testing & Oil Well Performance, Well Log Interpretation (WLI), Formation Evaluation, Well Workover Supervision, Pressure Transient Analysis and Petrophysical Log Analysis. Currently, he is the **CEO & Managing Director of Geo Resources Technology** wherein he is responsible in managing the services and providing technical supports to underground energy related projects concerning **field development, production, drilling, reservoir engineering and simulation.**

Throughout his long career life, Mr. Stan has worked for many international companies such as the **Kavala Oil, North Aegean Petroleum Company** and **Texaco Inc.**, as the **Managing Director, Operations Manager, Technical Trainer, Training Consultant, Petroleum Engineering & Exploration Department Head, Assistant Chief Petroleum Engineer, Reservoir Engineer, Resident Petroleum Engineer, Senior Petroleum Engineer** and **Petroleum Engineer** wherein he has been managing the evaluation of exploration wells, reservoir simulation, development training, production monitoring, wireline logging and well testing including selection and field application of well completion methods.

Mr. Stan has a **Master's degree in Petroleum Engineering** and a **Bachelor's degree in Geology** from the **New Mexico Institute of Mining & Technology (USA)** and from the **Aristotelian University (Greece)** respectively. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership of Management (ILM)** and a member of the **Society of Petroleum Engineers, USA (SPE)**, **Society of Well Log Professional Analysts, USA (SPWLA)** and **European Association of Petroleum Geoscientists & Engineers (EAGE)**. Moreover, Mr. Stan published numerous scientific and technical papers and delivered various trainings, courses and workshops worldwide.



Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0900	Overview of Drilling Operations
0900 – 0930	Exploration & Production Licenses, Drilling Personnel & Rotary Drilling Equipment
0930 – 0945	<i>Break</i>
0945 – 1045	The Drilling Process Onshore & Offshore
1045 – 1130	Drilling Economics
1130 – 1200	Rig Components
1200 – 1230	The Drillstring
1230 – 1245	<i>Break</i>
1245 – 1330	Design of the Drillstring
1330 – 1420	Drilling Bits
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0830	Design of PDC & Roller Cone Bits, Selection of Bits, Grading of Dull Bits, Assessing & Improving the Performance of Drill Bits
0830 – 0930	Formation Pressures & Well Control
0930 – 0945	<i>Break</i>
0945 – 1045	Introduction to Origin & Representation of Pore Pressures & Fracture Pressures
1045 – 1115	Origin, Prediction & Detection of Abnormal Pressures
1115 – 1230	Drilling Problems Associated with Abnormal Pressures
1230 – 1245	Prediction & Confirmation of Formation Fracture Pressures
1245 – 1300	<i>Break</i>
1300 – 1400	Principles of Primary & Secondary Well Control
1400 – 1420	Warning Signs of Kicks
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>



Day 3

0730 – 0830	Well Killing Procedures
0830 – 0930	BOP Equipment & BOP Stack Arrangements
0930 – 0945	<i>Break</i>
0945 – 1045	Drilling Fluids, Hydraulics & Casing
1045 – 1115	Functions, Properties, Design/Selection of Various Types of Drilling Fluid
1115 – 1230	Wellsite Tests Performed on Drilling Fluids
1230 – 1245	Design of a Solids Control System
1245 – 1315	Introduction of Pressure Losses in the Drilling System
1315 – 1330	<i>Break</i>
1330 – 1400	Optimization of Bit Hydraulics
1400 – 1420	Major Functions & Properties of Casing & Casing String Configurations
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0830	Casing Running Operations
0830 – 0930	The Casing Design Process
0930 – 0945	<i>Break</i>
0945 – 1045	Cementing & Directional Drilling
1045 – 1115	Functions & Properties of Cement, Single & Multiple Stage Cementing Operations
1115 – 1230	Designing a Cementing Operation
1230 – 1245	Assessing the Quality of the Cement Sheath
1245 – 1320	Introduction to Directional Drilling
1320 – 1335	<i>Break</i>
1335 – 1400	Designing the Trajectory for a Directional Well
1400 – 1420	Directional Drilling Tools & BHAs
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0830	Introduction to Wellbore Surveying
0830 – 0930	Calculating the Trajectory of a Directional Well Based on Survey Data
0930 – 0945	<i>Break</i>
0945 – 1045	Directional Surveying Tools
1045 – 1115	Measurement While Drilling & Subsea Drilling
1115 – 1230	Introduction to MWD & the Value of Real Time Data
1230 – 1245	MWD Data Collection & Transmission Techniques
1245 – 1300	<i>Break</i>
1300 – 1345	Introduction to Tools & Equipment Used to Drill from a Floating Drilling Rig
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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