COURSE OVERVIEW DE0810-4D
Advanced Analytics in Oil & Gas

Course Title
Advanced Analytics in Oil & Gas

Course Date/Venue
Session 1: August 19-22, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: November 11-14, 2024/Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
DE0810-4D

Course Duration/Credits
Four days/2.4 CEUs/24 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 advanced analytics in oil and gas. It covers the instrumented oil fields and the current situation in the upstream data analysis; the sampling, exploring, modifying, modelling and assessing (SEMMA) process; and the oilfield data management, oilfield exploration analysis and oilfield appraisal management.

During this interactive course, participants will learn the IoT revolution and IoT application in oil and gas fields; the smart sensors for smart oilfields and the blockchain basics; aggregating, analyzing and forecasting production from wells and reservoirs; the intelligent reservoir modeling workflow; the operational data model unlocks future value; and the operational data management platform for the key of digital transformation.

Course Objectives

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

- Apply and gain an advanced knowledge on analytics in oil and gas
- Discuss the instrumented oil fields and the current situation in the upstream data analysis
- Analyze the sampling, exploring, modifying, modelling and assessing (SEMMA) process
- Carryout oilfield data management, oilfield exploration analysis and oilfield appraisal management
- Discuss the IoT revolution and IoT application in oil and gas fields
- Apply smart sensors for smart oilfields and explain the blockchain basics
- Aggregate, analyze and forecast production from wells and reservoirs
- Illustrate the intelligent reservoir modeling workflow
- Define the operational data model that unlocks future value
- Employ operational data management platform as the key of digital transformation

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, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of advanced analytics in oil and gas for all professionals working in the field of data analysis, oil and gas exploration, geology and reservoir modelling. The course is also beneficial for those who are involved in the upstream oil production.

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 for technical reasons.

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

Certificates are accredited by the following international accreditation organizations: -

- 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 **2.4 CEUs** (Continuing Education Units) or **24 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.

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. 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.

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:

Ms. Diana Helmy, PgDip, MSc, BSc, is a **Senior Petroleum & Geologist** with extensive years of experience within the **Oil & Gas**, **Refinery** and **Petrochemical** industries. Her expertise widely covers in the areas of **Oil & Gas Analytics**, **Petrophysics & Reservoir Engineering**, **Subsurface Geology & Logging** Interpretation, **Petroleum Geology**, **Geophysics**, **Seismic** Processing & Exploration, **Seismic** Interpretation, **Sedimentology**, **Stratigraphy & Biostratigraphy**, **Petroleum Economy**, **Core** Analysis, Well Logging Interpretation, **Core Lab Analysis** & **SCAL**, **Sedimentary Rocks**, **Rock** Types, Core & Ditch Cuttings Analysis, Clastic, Carbonate & Basement Rocks, **Stratigraphic Sequences**, **Petrographically** Analysis, Thin Section Analysis, Scanning Electron Microscope (**SEM**), X-ray Diffraction (**XRD**), Cross-Section Tomography (**CT**), **Conventional & Unconventional** Analysis, **Porosity & Permeability**, **Geological & Geophysical** Model, **Sedimentary** Facies, **Formation Damage** Studies & Analysis, **Rig** Awareness, 2D&3D **Seismic** Data Processing, Static & Dynamic Correction, Noise Attenuation & Multiple Elimination Techniques, Velocity Analysis & Modeling and various software such as Petrel, OMEGA, LINUX, Kingdom ad Vista.

During her career life, Ms. Diana worked as a **Technical Sales & Marketing Manager**, **Reservoir Geologist**, **Seismic Engineer**, **Geology Instructor**, **Geoscience Instructor & Consultant** and **Petroleum Geology Researcher** from various international companies like the **Schlumberger**, Corex Services for Petroleum Services, Petrolia Energy Supplies and Alexandria University.

Ms. Diana has a **Postgraduate Diploma** in **Geophysics**, **Master** degrees in **Petroleum Geology** and **Geophysics** and a **Bachelor** degree in **Geology**. Further, she is a **Certified Instructor & Trainer** and has delivered numerous trainings, courses, workshops, seminars and conferences internationally.

Course Fee

US$ 6,750 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0945	***Instrumented Oil Fields***
0945 – 1000	*Break*

1000 – 1045	***Current Situation in the Upstream Data Analysis***
1045 – 1130	***The SEMMA Process-Sampling, Exploring, Modifying, Modeling & Assessing***
1130 – 1145	*Break*
1145 – 1230	***Oilfield Data Management***
1230 – 1315	***Oilfield Exploration Analysis***
1315 - 1420	***Oilfield Exploration Analysis (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0945	***Oilfield Appraisal Management***
0945 – 1000	*Break*
1000 – 1100	***Oilfield Appraisal Management (cont'd)***
1100 - 1200	***IoT Revolution***
1200 – 1215	*Break*
1215 – 1420	***IoT Revolution (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0945	***IoT Application in Oil & Gas Fields***
0945 – 1000	*Break*
1000 – 1100	***IoT Application in Oil & Gas Fields (cont'd)***
1100 - 1200	***Smart Sensors for Smart Oilfields***
1200 – 1215	*Break*
1215 – 1350	***Blockchain Basics***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 4

0730 – 0845	***Aggregate, Analyze & Forecast Production from Wells & Reservoirs***
1015 – 1030	*Break*
1030 - 1140	***Intelligent Reservoir Modeling Workflow***
1140 – 1200	***Defining the Operational Data Model Unlocks Future Value***
1200 – 1215	*Break*
1215 – 1330	***The Operational Data Management Platform is the Key of Digital Transformation***
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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