COURSE OVERVIEW DE0625
Generalist Engineer: Cross-Disciplinary Oil & Gas Operations Fundamentals

Course Title
Generalist Engineer: Cross-Disciplinary Oil & Gas Operations Fundamentals

Course Date/Venue
January 25-29, 2026/TBA Meeting Room, The H Dubai Hotel, Sheikh Zayed Rd - Trade Centre, Dubai, UAE

Course Reference
DE0625

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 up-to-date overview of Generalist Engineer: Cross-Disciplinary Oil & Gas Operations Fundamentals. It covers the hydrocarbon origins, reservoir fundamentals, exploration and seismic fundamentals and drilling engineering fundamentals; the well testing, well evaluation, well completion and intervention basics; the wellhead components and Xmas tree basics, manifolds and gathering systems, flowlines, choke valves and pressure control; the hazards and safety during production operations; the oil processing and separation technologies, gas processing fundamentals and produced water treatment processes; and the artificial lift systems, flow assurance fundamentals, rotating equipment and static equipment fundamentals.

During this interactive course, participants will learn the electrical systems in oil and gas, instrumentation principles, controls and automation and maintenance and reliability engineering; the risk management, hazard identification, permit to work system and job safety analysis (JSA/JHA); the process safety management (PSM), asset integrity management and pipeline engineering and integrity; the ISO/API standards for well integrity and annular pressure monitoring; and the emergency response plan (ERP), control room operations, operational excellence framework and human factors and competency development.

Course Objectives

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

- Get certified as a "*Certified Generalist Engineer*"
- Discuss hydrocarbon origins, reservoir fundamentals, exploration and seismic fundamentals and drilling engineering fundamentals
- Carryout well testing, well evaluation, well completion and intervention basics
- Recognize wellhead components and Xmas tree basics, manifolds and gathering systems, flowlines, choke valves and pressure control and hazards and safety during production operations
- Explain oil processing and separation technologies, gas processing fundamentals and produced water treatment processes
- Identify artificial lift systems, flow assurance fundamentals, rotating equipment and static equipment fundamentals
- Recognize electrical systems in oil and gas, instrumentation principles, controls and automation and maintenance and reliability engineering
- Apply risk management, hazard identification, permit to work system and job safety analysis (JSA/JHA)
- Employ process safety management (PSM), asset integrity management and pipeline engineering and integrity
- Review ISO/API standards for well integrity and apply annular pressure monitoring
- Carryout emergency response plan (ERP), control room operations, operational excellence framework and human factors and competency development

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 generalist engineering for engineers from mechanical, electrical, chemical or petroleum disciplines, operations staff, maintenance personnel, technical supervisors or team leads, project engineers, process or production engineers and other technical staff.

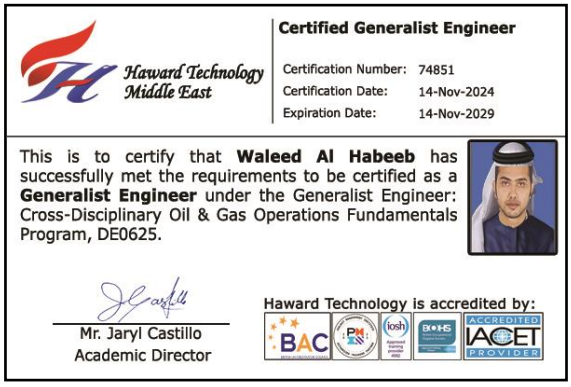
Course Certificate(s)

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a "*Certified Generalist Engineer*". Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-



(2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-24

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
DE0625	Generalist Engineer: Cross-Disciplinary Oil & Gas Operations Fundamentals	Nov 10-14, 2024	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **3.0**

TRUE COPY

Jaryl Castillo
Academic Director

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

P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | E-mail: info@haward.org | Website: www.haward.org

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.

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. Konstantin Zorbalas, MSc, BSc, is a **Senior Petroleum Engineer & Well Completions Specialist** with **30 years** of **offshore** and **onshore** experience in the **Oil** & **Gas**, **Refinery** & **Petroleum** industries. His wide expertise includes **OIP Estimation & Range** of **Uncertainty**, **Waterflood** Management, **Water Flooding**, **Water Flooding & Reservoir** Sourcing Issues, **Water Flooding**, **Reservoir** Souring & Water Breakthrough, **Well & Reservoir Management** and Monitoring, **Fishing Operations**, **Drilling & Work-Over Operations**, **Workover Best Practices**, Well Testing, Completion Design & Operation, Well Stimulation and **Workover**, **Well Stimulation & Workover** Planning, **Well Completion**, **Servicing & Work-Over** Operations, **Completions & Workover**, HSE in **Work-Over & Drilling** Operations, **Well Testing Completion & Workover**, Basic **Drilling**, **Completion & Workover** Operations, Advanced **Drilling**, **Completion & Workovers Fluids**, **Cementing** Integrity Evaluation, **Cementing** Design, **Cement** Integrity Assurance & Evaluation, Basic **Cementing** (Operations) & Basic Acidizing, **Advanced** Cementing Technology, **Casing & Cementing, Advanced** Cementing & Stimulation, **Artificial Lift** Systems, New Technology in **Artificial Lift Systems**, **Artificial Lift** Methods, **Crude Oil Artificial Lift** Operations, **Artificial Lift** Systems, **Artificial Lift** & Challenges, **Artificial Lift** Systems & Optimization Technology, Production Optimization with **Artificial Lift** System, **Well Integrity & Artificial Lift**, **Formation Damage** & Flow Assurance Issues, **Formation Damage** Evaluation, Prevention, Remediation & Control, **Formation Damage** (Causes, Prevention & Remediation), **Well Completion** Design & Operations, Crude **Oil Market**, Oil **Reserves**, Global Oil **Supply & Demand**, Government Legislation & Oil **Contractual** Agreements, Oil **Projects & Their Feasibility** (Revenue and Profitability), Oil & Gas **Exploration** and **Methods**, Oil & Gas **Extraction**, Oil **Production & Refining**, Technology Usage in Industrial Security; **Oil & Gas Economics** Modelling Evaluation Decision Making & Risk Analysis, **Economic Evaluation** & Global Profitability Criteria, **Petroleum Economics**, Fluid Properties & Phase Behaviour (**PVT**), **Workovers & Completions**, Acidizing Application in **Sandstone & Carbonate**, **Well Testing** Analysis, **Reserves** Evaluation, **Reservoir** Fluid Properties, **Reservoir** Monitoring, **Heavy Oil** Technology, Applied **Water Technology**, **X-mas Tree & Wellhead** Operations & Testing, **Artificial Lift** Systems (**Gas Lift**, **ESP**, and **Rod Pumping**), **Well Cementing**, **Well Completion** Design, **Slickline** Operations, **Cased Hole Logging** and **Production Logging**. Further, he is actively involved in **Project Management** with special emphasis in production technology and field optimization, performing conceptual studies, economic analysis with risk assessment and field development planning. He is currently the **Senior Petroleum Engineer & Consultant** of **Abu Dhabi National Oil Company** (**ADNOC**) Group of companies wherein he is involved in the mega-mature fields in the Arabian Gulf, predominantly carbonate reservoirs; designing the acid stimulation treatments with post-drilling rigless operations; utilizing CT with tractors and DTS systems; and he is responsible for gas production and preparing for reservoir engineering and simulation studies, well testing activities, field and reservoir monitoring, production logging and optimization and well completion design.

During his career life, Mr. Zorbalas worked as a **Senior Production Engineer**, **Well Completion Specialist**, **Production Manager**, **Project Manager**, **Technical Manager**, **Trainer**, **Technical Supervisor** & **Contracts Manager**, **Production Engineer**, **Production Supervisor**, **Production Technologist**, **Technical Specialist**, **Business Development Analyst**, **Field Production Engineer** and **Field Engineer**. He worked for many **world-class oil/gas companies** such as **ZADCO**, **ADMA-OPCO**, **Oilfield International Ltd**, **Burlington Resources** (later acquired by **Conoco Phillips**), **MOBIL E&P**, **Saudi Aramco**, **Pluspetrol E&P SA**, **Wintershall**, **Taylor Energy**, **Schlumberger**, **Rowan Drilling** and **Yukos EP** where he was in-charge of the **design and technical analysis** of a gas plant with capacity **1.8 billion m3/yr gas**. His achievements include **boosting oil production 17.2% per year** since 1999 using **ESP** and **Gas Lift systems**.

Mr. Zorbalas has **Master's** and **Bachelor's** degrees in **Petroleum Engineering** from the **Mississippi State University**, **USA**. Further, he is an **SPE Certified Petroleum Engineer**, **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**), an active member of the Society of Petroleum Engineers (**SPE**) and has numerous scientific and technical publications and delivered innumerable training courses, seminars 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 for technical reasons.

Course Fee

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.

Accommodation

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

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: ***Sunday, 25th of January 2026***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Global Oil & Gas Industry Landscape*** *Evolution of Upstream, Midstream, and Downstream Sectors • Global Energy Mix & Future Trends • Major Producing Regions & Key Players • Industry Value Chain: Exploration to Distribution*
0930 – 0945	*Break*
0945 – 1040	***Hydrocarbon Origins, Reservoir Fundamentals*** *Formation of Hydrocarbons • Reservoir Rock Properties (Porosity, Permeability) • Drive Mechanisms (Solution Gas, Water, Gravity) • Reservoir Characterization & Uncertainties*
1040 – 1130	***Exploration & Seismic Fundamentals*** *Geological Surveys & Structural Traps • 2D/3D Seismic Acquisition Basics • Seismic Processing & Interpretation Workflow • Prospect Evaluation & Exploration Risk*
1130 – 1230	***Drilling Engineering Fundamentals*** *Rotary Drilling System Components • Drilling Fluids: Functions & Properties • Drill String, Bits, and BHA Basics • Casing, Cementing, and Well Construction Stages*

1230 – 1245	*Break*
1245 – 1420	***Well Testing & Well Evaluation*** *DST Objectives & Test Types • Surface Well Testing Equipment • Data Interpretation: Flow Rate, Pressure, PI • Safety Considerations During Flow Testing*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: Monday, 26th of January 2026

0730 – 0830	***Well Completion & Intervention Basics*** *Completion Types (Open Hole, Cased Hole) • Packers, Liners, Tubing Strings • Artificial Lift Introduction • Basic Well Intervention Methods (Coil Tubing, Slickline, E-Line)*
0830 – 0930	***Surface Production Facilities Overview*** *Wellhead Components & Xmas Tree Basics • Manifolds & Gathering Systems • Flowlines, Choke Valves & Pressure Control • Hazards & Safety During Production Operations*
0930 – 0945	*Break*
0945 – 1030	***Oil Processing & Separation Technologies*** *Two-Phase & Three-Phase Separators • Separator Internals (Inlet Devices, Mist Extractors) • Dehydration & Desalting Fundamentals • Emulsion Formation and Breaker Chemicals*
1030– 1230	***Gas Processing Fundamentals*** *Gas Sweetening (Amine Systems) • Dehydration (Glycol, Molecular Sieve) • NGL Recovery Basics • Compression: Single versus Multistage Compressors*
1230 – 1245	*Break*
1245 – 1420	***Produced Water Treatment Processes*** *Primary, Secondary & Tertiary Treatment • API Separators, Hydrocyclones, Floatation Units • Filtration & Polishing Systems • Re-Injection & Disposal Requirements*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: Tuesday, 27th of January 2026

0730 – 0830	***Artificial Lift Systems Overview*** *ESP Basic Components & Operation • Gas Lift Principles & Valve Design • Beam Pumping Systems • Selection Criteria for Different Lift Methods*
0830 - 0930	***Flow Assurance Fundamentals*** *Hydrates Formation & Prevention • Waxes, Asphaltenes, and Scaling • Pigging Operations Overview • Role of Inhibitors (Corrosion, Hydrate, Scale)*

0930 – 0945	*Break*
0945 – 1130	***Rotating Equipment Basics*** *Centrifugal & Reciprocating Pumps • Gas Compressors (Centrifugal, Screw, Reciprocating) • Turbines: Gas & Steam • Common Failure Modes & Troubleshooting Basics*
1130– 1230	***Static Equipment Fundamentals*** *Pressure Vessels & Heat Exchangers • Shell & Tube Exchanger Basics • Storage Tanks & Floating Roofs • Piping Systems & Valves (Types and Functions)*
1230 – 1245	*Break*
1245 – 1420	***Electrical Systems in Oil & Gas*** *Switchgear LV/MV Fundamentals • Motors: Induction versus Synchronous • Power Distribution & Protection Basics • Hazardous Area Classification (ATEX/IECEx)*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: Wednesday, 28th of January 2026

0730 – 0830	***Instrumentation Principles*** *Pressure, Flow, Level, Temperature Instruments • Transmitters & Sensors (HART/Fieldbus) • Control Valves & Actuators • PLC/DCS Basics for Field Engineers*
0830 – 0930	***Controls & Automation*** *Process Control Loops (P, PI, PID) • SCADA & Remote Operations • Safety Instrumented Systems (SIS) SIL Levels • Alarm Management Basics*
0930 – 0945	*Break*
0945 – 1130	***Maintenance & Reliability Engineering*** *Preventive versus Predictive Maintenance • Condition Monitoring (Vibration, Thermography) • Reliability Tools (RCM, FMEA, RBI) • Spare Parts & CMMS Basics*
1130 – 1230	***HSE Fundamentals for Oil & Gas*** *Risk Management & Hazard Identification • Permit to Work System • Job Safety Analysis (JSA/JHA) • PPE & Safety Culture Basics*
1230 – 1245	*Break*
1245 – 1420	***Process Safety Management (PSM)*** *PSM Pillars & Lifecycle • LOPA Introduction & Barrier Management • Bow-Tie Analysis • Incident Investigation Basics*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5:	***Thursday 29th of February 2025***
0730 – 0830	***Asset Integrity Management*** *Integrity Operating Windows • Inspection Methods (NDT, API Standards) • Corrosion Mechanisms (CO2, H2S, MIC) • Fitness-for-Service Basics (API 579)*
0830 - 0930	***Pipeline Engineering & Integrity*** *Pipeline Components & Pigging • Leak Detection Systems • Right-of-Way & Surveillance • Corrosion Protection: Cathodic Protection Basics*
0930 – 0945	*Break*
0945 – 1230	***Well Integrity Management*** *ISO/API Standards for Well Integrity • Annular Pressure Monitoring • Barrier Envelopes: Primary and Secondary • Common Failures & Troubleshooting*
1230 – 1245	*Break*
1245– 1300	***Emergency Response & Operations Excellence*** *Emergency Response Plan (ERP) Elements • Control Room Operations • Operational Excellence Framework • Human Factors & Competency Development*
1300 – 1315	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1315 – 1415	***COMPETENCY EXAM***
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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