COURSE OVERVIEW DE1095
Wellhead Operations Specialist
Wellhead System Maintenance and Safety

Course Title
Wellhead Operations Specialist: Wellhead System Maintenance and Safety

Course Date/Venue
August 24-28, 2025/Falcon 4 Meeting Room, Voco Dubai by IHG, Dubai, UAE

Course Reference
DE1095

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Wellhead Operations Specialist: Wellhead System Maintenance and Safety. It covers the purpose and role of the wellhead, wellhead types, basic components of a wellhead and interface with casing and tubing; the wellhead system components, types of wellheads and applications and wellhead pressure control equipment; the materials and design standards, safety requirements and industry best practices; the wellhead installation procedures and pressure testing techniques; the inspection and integrity assessment, sealing systems and gasket maintenance; and the bolt torqueing and tensioning practices.

Further, the course will also discuss the recording maintenance and inspection results; the API and operator documentation standards, inspection checklist preparation, reporting anomalies and corrective actions; the routine preventive maintenance, valve maintenance procedures and corrosion control and protection; the grease injection systems and wellhead accessories maintenance; and troubleshooting common wellhead issues and the safety hazards and risk assessment.

During this interactive course, participants will learn the procedures for isolating wellhead equipment, lockout/tagout requirements, verification of zero-energy state and documentation and control; the emergency shutdown systems, blowout prevention and response; the fire protection around wellhead installations and incident reporting and investigation; the wellhead maintenance planning, wellhead system upgrades and modifications and interface with other oilfield systems; monitoring wellhead pressures and trends; the data acquisition systems and predictive maintenance approaches; and the interpretation of condition monitoring data.

Course Objectives

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

- Apply and gain a comprehensive knowledge on wellhead system maintenance and safety
- Discuss the purpose and role of the wellhead including wellhead types, basic components of a wellhead and interface with casing and tubing
- Identify wellhead system components, types of wellheads and applications and wellhead pressure control equipment
- Explain materials and design standards and apply safety requirements and industry best practices, wellhead installation procedures and pressure testing techniques
- Carryout inspection and integrity assessment, sealing systems and gasket maintenance as well as bolt torqueing and tensioning practices
- Record maintenance and inspection results, review API and operator documentation standards and apply inspection checklist preparation, reporting anomalies and corrective actions
- Apply routine preventive maintenance, valve maintenance procedures and corrosion control and protection
- Recognize grease injection systems and implement wellhead accessories maintenance, troubleshooting common wellhead issues and safety hazards and risk assessment
- Apply procedures for isolating wellhead equipment, lockout/tagout requirements, verification of zero-energy state and documentation and control
- Carryout emergency shutdown systems, blowout prevention and response, fire protection around wellhead installations and incident reporting and investigation
- Employ wellhead maintenance planning, wellhead system upgrades and modifications and interface with other oilfield systems
- Monitor wellhead pressures and trends, recognize data acquisition systems and apply predictive maintenance approaches including interpretation of condition monitoring data

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 wellhead system maintenance and safety for wellhead operations specialist, wellhead technicians, drilling and completion engineers, production operators and supervisors, field service engineers, rig personnel (tool pushers, drillers, assistant drillers), safety and HSE officers, maintenance and mechanical technicians, petroleum engineers and well engineers, asset integrity engineers and other technical staff.

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 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.

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:

Dr. Chris Kapetan, PhD, MSc, is a **Senior Petroleum Engineer** with over **30 years** of international experience within the **onshore** and **offshore oil** & **gas** industry. His wide experience covers **Decision Analytic Modelling Methods** for **Economic Evaluation**, **Probabilistic Risk Analysis** (**Monte Carlo Simulator**) **Risk Analysis Foundations**, **Global Oil Demand**, Crude Oil Market, Global Oil Reserves, Oil Supply & Demand, Governmental Legislation, Contractual Agreements, **Financial** Modeling, **Oil Contracts**, **Project Risk Analysis**, **Feasibility Analysis** Techniques, **Capital Operational Costs**, Oil & Gas Exploration Methods, **Reservoir** Evaluation, **Extraction of Oil & Gas**, **Crude** Oil Types & Specifications, Sulphur, Sour Natural Gas, **Natural Gas Sweeting**, **Petroleum Production**, Field Layout, **Production** Techniques & Control, **Surface Production** Operations, **Oil Processing**, Oil Transportation-Methods, **Flowmetering & Custody Transfer** and **Oil Refinery**. Further, he is also well-versed in Enhanced Oil Recovery (**EOR**), Electrical Submersible Pumps (**ESP**), **Oil Industries Orientation**, **Geophysics**, Cased Hole **Formation Evaluation**, Cased Hole **Applications**, Cased Hole **Logs**, Production **Operations**, Production **Management**, Perforating **Methods & Design**, Perforating **Operations**, **Fishing** Operations, **Well & Reservoir** Testing, **Reservoir Stimulation**, **Hydraulic Fracturing**, **Carbonate** Acidizing, **Sandstone** Acidizing, **Drilling Fluids Technology**, Drilling **Operations**, **Directional** Drilling, **Artificial Lift**, **Gas Lift Design**, **Gas Lift Operations**, **Petroleum Business**, **Petroleum Economics**, **Field Development Planning**, **Gas Lift Valve** Changing & Installation, **Well Completion** Design & Operation, Well **Surveillance**, Well **Testing**, Well **Stimulation** & **Control** and **Workover Planning**, **Completions** & **Workover**, **Rig Sizing**, **Hole Cleaning** & **Logging**, **Well Completion**, **Servicing** and **Work-Over Operations**, Practical **Reservoir Engineering**, **X-mas Tree & Wellhead** Operations, Maintenance & Testing, **Advanced Petrophysics/Interpretation** of **Well Composite**, **Construction Integrity** & **Completion**, **Coiled Tubing Technology**, **Corrosion Control**, **Slickline**, **Wireline & Coil Tubing**, **Pipeline Pigging**, **Corrosion Monitoring**, **Cathodic Protection** as well as Root Cause Analysis (**RCA**), Root Cause Failure Analysis (**RCFA**), **Gas Conditioning & Process Technology**, **Production Safety** and **Delusion of Asphalt**. Currently, he is the **Operations Consultant** & the **Technical Advisor** at **GEOTECH** and an independent **Drilling Operations Consultant** of various engineering services providers to the international clients as he offers his expertise in many areas of the **drilling & petroleum discipline** and is well **recognized & respected** for his process and procedural expertise as well as ongoing participation, interest and experience in continuing to promote technology to producers around the world.

Throughout his long career life, Dr. Chris has worked for many international companies and has spent several years **managing** technically **complex wellbore interventions** in both **drilling** & **servicing**. He is a **well-regarded** for his **process** and **procedural expertise**. Further, he was the **Operations Manager** at **ETP Crude Oil Pipeline Services** where he was fully responsible for optimum operations of crude oil pipeline, **workover** and **directional drilling**, **drilling rigs** and equipment, drilling of various geothermal deep wells and **exploration wells**. Dr. Chris was the **Drilling** & **Workover Manager** & **Superintendent** for **Kavala Oil** wherein he was responsible for supervision of **drilling operations** and **offshore exploration**, quality control of performance of **rigs**, **coiled tubing**, crude oil transportation via pipeline and abandonment of **well** as per the API requirements. He had occupied various key positions as the **Drilling Operations Consultant**, **Site Manager**, **Branch Manager**, **Senior Drilling** & **Workover Manager** & **Engineer** and **Drilling** & **Workover Engineer**, **Operations Consultant**, **Technical Advisor** in several petroleum companies responsible mainly on an **offshore** sour oil field (under water flood and gas lift) and a gas field. Further, Dr. Chris has been a **Professor** of the **Oil Technology College**.

Dr. Chris has **PhD** in **Reservoir Engineering** and a **Master** degree in **Drilling & Production Engineering** from the **Petrol-Gaze Din Ploiesti University**. Further, he is a **Certified Surfaced BOP Stack Supervisor** of **IWCF**, a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management** (**ILM**) and has conducted **numerous short courses**, **seminars** and **workshops** and has published several technical books on **Production Logging**, **Safety Drilling Rigs** and **Oil Reservoir**.

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, 24th of August 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Overview of Wellhead Operations*** *Purpose & Role of the Wellhead • Wellhead Types (Surface/Subsea) • Basic Components of a Wellhead • Interface with Casing & Tubing*
0930 - 0945	*Break*
0945 – 1045	***Wellhead System Components*** *Casing Head & Casing Spools • Tubing Head & Hanger Systems • Seals & Gaskets • Adapter Spools & Connections*
1045 - 1145	***Types of Wellheads & Applications*** *Conventional Wellheads • Unitized Wellheads • Subsea Wellheads Overview • Application Scenarios (Onshore versus Offshore)*
1145 - 1230	***Wellhead Pressure Control Equipment*** *Christmas Tree Configuration • Choke Valves • Flow Control Mechanisms • Pressure Ratings & Working Pressures*
1230 – 1245	*Break*
1245 – 1330	***Materials & Design Standards*** *API Standards Overview (API 6A, API 16A) • Material Selection for Pressure-Containing Components • Corrosion Resistance Considerations • Design Ratings & Quality Assurance*
1330 - 1420	***Safety Requirements & Industry Best Practices*** *Regulatory Requirements Overview • HSE Principles in Wellhead Operations • Safety Barriers & Redundancies • Common Hazards in Wellhead Maintenance*
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, 25th of August 2025***

0730 – 0830	***Wellhead Installation Procedures*** *Rig-Up & Rig-Down Procedures • Alignment & Positioning • Installation Torque Specifications • Verification of Correct Assembly • X-Mas Trees*
0830 – 0930	***Pressure Testing Techniques*** *Leak Test versus Strength Test • Pressure Test Procedures & Records • Test Equipment Setup • Interpretation of Test Results*
0930 - 0945	*Break*
0945 – 1130	***Inspection & Integrity Assessment*** *Visual Inspection Requirements • NDT Techniques (MPI, UT) for Wellhead Components • Wear & Corrosion Inspection • Inspection Intervals & Documentation*

1130 - 1230	***Sealing Systems & Gasket Maintenance*** *Types of Seals & Gaskets Used • Elastomer Selection Criteria • Seal Replacement Procedures • Leak Prevention Best Practices*
1230 - 1245	*Break*
1245 - 1330	***Bolt Torqueing & Tensioning Practices*** *Torque versus Tension Principles • Proper Bolt Tightening Sequence • Use of Hydraulic Torque Wrenches • Troubleshooting Common Bolting Issues*
1330 - 1420	***Documentation & Reporting*** *Recording Maintenance & Inspection Results • API & Operator Documentation Standards • Inspection Checklist Preparation • Reporting Anomalies & Corrective Actions*
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, 26th of August 2025***

0730 – 0830	***Routine Preventive Maintenance*** *Scheduled Maintenance Planning • Lubrication of Moving Parts • Greasing Procedures for Valves & Seals • Verification of Pressure Containment Integrity*
0830 – 0930	***Valve Maintenance Procedures*** *Gate Valve & Choke Valve Servicing • Actuator Maintenance • Seat & Stem Inspection • Valve Leak Detection & Correction*
0930 - 0945	*Break*
0945 – 1130	***Corrosion Control & Protection*** *Cathodic Protection Principles • Coating & Painting Requirements • Monitoring Corrosion Rates • Inspection of Corrosion-Prone Areas*
1130 - 1230	***Grease Injection Systems*** *Greasing Wellhead Seals • Grease Types & Compatibility • Injection Ports & Fittings • Maintenance of Grease Pumps*
1230 - 1245	*Break*
1245 - 1330	***Wellhead Accessories Maintenance*** *Pressure Gauges & Instrumentation • Check Valves & Fittings • Surface Control Panels • Maintenance of Control Lines*
1330 - 1420	***Troubleshooting Common Wellhead Issues*** *Identifying Leaks & Pressure Drops • Diagnosing Valve Malfunction • Addressing Seal Failures • Corrective Maintenance Strategies*
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, 27th of August 2025***

0730 – 0830	***Safety Hazards & Risk Assessment*** *Identification of Hazards in Wellhead Areas • Risk Assessment Methodology (JSA) • Personal Protective Equipment (PPE) • Control of Ignition Sources*
0830 – 0930	***Wellhead Isolation & Lockout/Tagout*** *Procedures for Isolating Wellhead Equipment • Lockout/Tagout Requirements • Verification of Zero-Energy State • Documentation & Control*

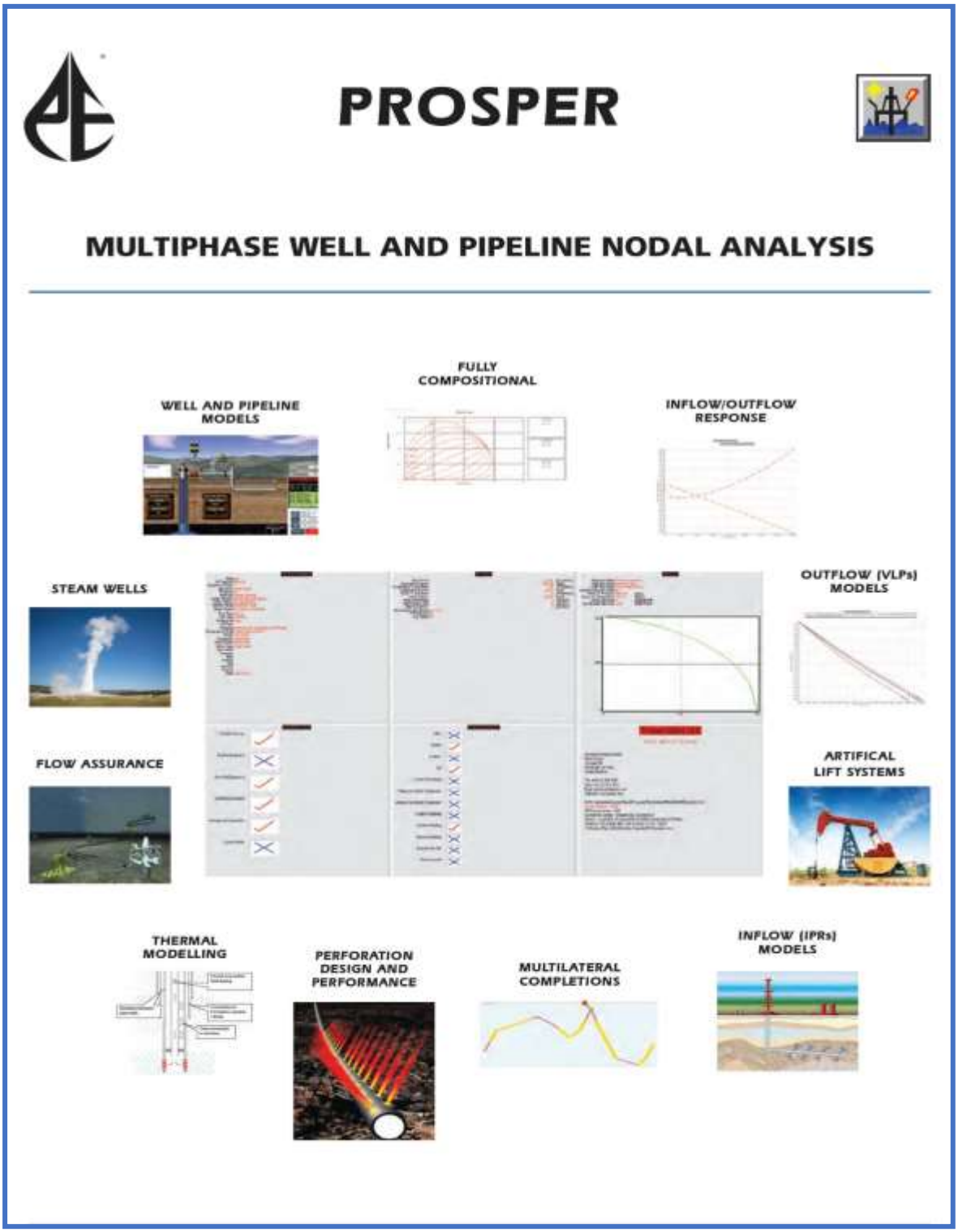
0930 - 0945	Break
0945 – 1130	***Emergency Shutdown Systems*** Emergency Shutdown Valves (ESDV) • Emergency Depressurization Procedures • Well Control Barriers • Role of ESD in Wellhead Integrity
1130 - 1230	***Blowout Prevention & Response*** Well Control Principles • BOP Stack Interface with Wellhead • Emergency Well Shut-In Procedures • Crew Roles during Blowout Scenarios
1230 - 1245	Break
1245 - 1330	***Fire Protection around Wellhead Installations*** Passive & Active Fire Protection Systems • Firefighting Equipment Requirements • Firewater System Inspection • Escape Routes & Muster Points
1330 - 1420	***Incident Reporting & Investigation*** Reporting Requirements for Incidents • Root Cause Analysis Principles • Learning from Incidents • Record Keeping & Documentation
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, 28th of August 2025***

0730 – 0830	***Wellhead Maintenance Planning*** Maintenance Planning Tools & Systems • Coordination with Drilling/Completion Teams • Spare Parts Management • Reliability-Centered Maintenance (RCM) Concepts
0830 – 0930	***Wellhead System Upgrades & Modifications*** Retrofit Procedures • Design Considerations for Upgrades • Managing Obsolescence • Regulatory Approval Requirements
0930 - 0945	Break
0945 – 1130	***Interface with other Oilfield Systems*** Christmas Tree Interface • Connection to Flowlines & Manifolds • Subsea Wellhead Overview • Hydraulic Control Systems Overview
1130 - 1230	***Performance Monitoring & Data Management*** Monitoring Wellhead Pressures & Trends • Data Acquisition Systems • Predictive Maintenance Approaches • Interpretation of Condition Monitoring Data
1230 - 1245	Break
1245 - 1345	***Hands-On Practical Workshop*** Demonstration of Wellhead Disassembly • Seal Replacement Exercise • Bolt Torqueing Demonstration • Leak Detection Exercise
1345 – 1400	***Course Conclusion*** Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	***POST-TEST***
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "Prosper" software.



Course Coordinator

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