

COURSE OVERVIEW DE0338
Concept Selection and Specification of Production Facilities in Field Development Projects

Course Title

Concept Selection and Specification of Production Facilities in Field Development Projects

Course Date/Venue

Please see page 3

Course Reference

DE0338

Course Duration/Credits

Five Days 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 Concept Selection and Specification of Production Facilities in Field Development Projects. It covers the phases of a field development project and key components of a field development plan; the decision tree analysis and risk and opportunity assessments; the factors influencing facility design including fluid properties and their impact on facilities; the importance of location and contractual obligations including the operating conditions from wellhead to separation; and the types of separators, separator sizing and design.



Further, the course will also discuss the reasons for stabilization and dehydration, equipment and methodologies; water handling, treatment methods and equipment; the specifications for produced water systems and gas compression systems; the initial gas treatment methods and gas dehydration techniques; the gas sweetening processes and adsorption methods as well as the types of artificial lift systems; and the impact of artificial lift on facilities design.

During this interactive course, participants will learn the secondary/tertiary production techniques and asset integrity and inherently safe design principles; the principles of asset integrity including the rate, composition, temperature and pressure of design impacts; the design aspects of midstream facilities, performance of production versus midstream facilities and delivering saleable products to the market; and exploring future trends in production facilities design covering technological advancements, sustainability and environmental considerations.

Course Objectives

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

- Apply and gain a comprehensive knowledge on concept selection and specification
- Discuss the phases of a field development project and key components of a field development plan
- Carryout decision tree analysis and risk and opportunity assessments
- Identify the factors influencing facility design including fluid properties and their impact on facilities
- Discuss the importance of location and contractual obligations including the operating conditions from wellhead to separation
- Recognize the types of separators, separator sizing and design as well as explain the reasons for stabilization and dehydration, equipment and methodologies
- Apply water handling, treatment methods and equipment and discuss specifications for produced water systems
- Recognize gas compression systems and apply initial gas treatment methods and gas dehydration techniques
- Illustrate gas sweetening processes and adsorption methods as well as identify the types of artificial lift systems and the impact of artificial lift on facilities design
- Employ secondary/tertiary production techniques and discuss asset integrity and inherently safe design principles
- Explain the principles of asset integrity including the design impacts of rate, composition, temperature and pressure
- Describe the design aspects of midstream facilities, performance of production versus midstream facilities and delivering saleable products to the market
- Explore future trends in production facilities design covering technological advancements, sustainability and environmental considerations

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 concept selection and specification of production facilities in field development projects for those working on field development teams, as well as those who need to better understand how surface facilities are selected and how subsurface characteristics affect facility design and specification.

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 reason.

Course Date/Venue

Session(s)	Date	Venue
1	April 27-May 01, 2026	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
2	July 19-23, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
3	September 07-11, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
4	November 01-05, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
5	December 13-17, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
6	December 13-17, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
7	January 03-07, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
8	January 31-February 04, 2027	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
9	March 15-19, 2027	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain

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: -

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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.

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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. Hesham Abdou, PhD, MSc, BSc, is a **Senior Drilling & Petroleum Engineer** with over **30 years** of integrated industrial and academic experience as a **University Professor**. His specialization widely covers in the areas of **Drilling & Completion Technology, Directional Drilling, Horizontal & Sidetracking, Drilling Operation Management, Drilling & Production Equipment, ERD Drilling & Stuck Pipe Prevention, Natural & Artificial Flow Well Completion, Well Testing Procedures & Evaluation, Well Performance, Coiled Tubing Technology, Oil Recovery Methods Enhancement, Well Integrity Management, Well Casing & Cementing, Acid Gas Removal, Heavy Oil Production & Treatment Techniques, Crude Oil Testing & Water Analysis, Crude Oil & Water Sampling Procedures, Equipment Handling Procedures, Crude & Vacuum Process Technology, Gas Conditioning & Processing, Cooling Towers Operation & Troubleshooting, Sucker Rod Pumping, ESP & Gas Lift, PCP & Jet Pump, Pigging Operations, Electric Submersible Pumps (ESP), Progressive Cavity Pumps (PCP), Water Flooding, Water Lift Pumps Troubleshooting, Water System Design & Installation, Water Networks Design Procedures, Water Pumping Process, Pipelines, Pumps, Turbines, Heat Exchangers, Separators, Heaters, Compressors, Storage Tanks, Valves Selection, Compressors, Tank & Tank Farms Operations & Performance, Oil & Gas Transportation, Oil & Gas Production Strategies, Artificial Lift Methods, Piping & Pumping Operations, Oil & Water Source Wells Restoration, Pump Performance Monitoring, Rotor Bearing Modelling, Hydraulic Repairs & Cylinders, Root Cause Analysis, Vibration & Condition Monitoring, Piping Stress Analysis, Amine Gas Sweetening & Sulfur Recovery, Heat & Mass Transfer and Fluid Mechanics.**

During his career life, Dr. Hesham held significant positions and dedication as the **General Manager, Petroleum Engineering Assistant General Manager, Workover Assistant General Manager, Workover Department Manager, Artificial Section Head, Oil & Gas Production Engineer and Senior Instructor/Lecturer** from various companies and universities such as the Cairo University, Helwan University, British University in Egypt, Banha University and Agiba Petroleum Company.

Dr. Hesham has a **PhD** and **Master** degree in **Mechanical Power Engineering** and a **Bachelor** degree in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and a **Peer Reviewer**. Dr. Hesham is a member of Egyptian Engineering Syndicate and the Society of Petroleum Engineering. Moreover, he has published technical papers and journals and has delivered numerous trainings, workshops, courses, seminars and conferences internationally.

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.
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.
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.
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.
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.
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 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 – 0930	Introduction to Field Development Projects <i>Overview of the Upstream Sector • Phases of a Field Development Project</i>
0930 – 0945	<i>Break</i>
0945 – 1100	How to Develop the Project Framework <i>Key Components of a Field Development Plan • Setting Objectives & Goals</i>
1100 – 1200	Decision Making Strategy in Projects <i>Decision Tree Analysis • Risk & Opportunity Assessments</i>
1200 – 1245	Factors Influencing Facility Design <i>Reservoir Type & Its Importance • Drive Mechanisms</i>
1245 – 1300	<i>Break</i>
1300 – 1345	Fluid Properties & their Impact on Facilities <i>PVT Analysis • Phase Behavior</i>
1345 – 1415	Importance of Location & Contractual Obligations <i>Accessibility & Logistical Challenges • Contractual Constraints & Flexibility</i>
1415 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0930	Operating Conditions from Wellhead to Separation Flow Assurance • Wellhead Controls & Chokes
0930 – 0945	Break
0945 – 1100	Primary Production Facilities: Initial Separation Types of Separators • Separator Sizing & Design
1100 – 1200	Oil Stabilization & Dehydration Equipment Reasons for Stabilization Dehydration • Equipment & Methodologies
1200 – 1230	Design of Produced Water Systems Overview of Water Handling • Treatment Methods & Equipment
1230 – 1245	Break
1245 – 1345	Specifications for Produced Water Systems Meeting Environmental Regulations • Injection Well Requirements
1345 – 1415	Gas Handling: Basics Gas Compression Systems • Initial Gas Treatment Methods
1415 – 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	Gas Dehydration Techniques Glycol Dehydration Units • Membrane Systems
0930 – 0945	Break
0945 – 1100	Gas Sweetening Processes Amine Systems • Adsorption Methods
1100 – 1200	Introduction to Artificial Lift Systems Reasons & Scenarios for Artificial Lift • Types of Artificial Lift Systems
1200 – 1230	Impact of Artificial Lift on Facilities Design Surface Equipment Implications • Power Requirements
1230 – 1245	Break
1245 – 1345	Secondary/Tertiary Production Techniques Water Flooding, Gas Injection • Impact on Facility Design
1345 – 1415	Asset Integrity & Inherently Safe Design Principles Importance of Safety in Design • Recognizing & Mitigating Hazards
1415 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0930	Principles of Asset Integrity in Detail Corrosion Management • Inspection & Maintenance Planning
0930 – 0945	Break
0945 – 1100	Rate, Composition, Temperature & Pressure: Design Impacts Material Selection • Equipment Rating & Safety Factors
1100 – 1200	Introduction to Midstream Facilities Overview of the Midstream Sector • Relationship with Upstream
1200 – 1230	Design Aspects of Midstream Facilities Flow Stabilization • Storage & Transportation Considerations
1230 – 1245	Break
1245 – 1345	Performance of Production vs. Midstream Facilities Efficiency & Optimization • Matching Upstream & Midstream Operations

1345 - 1415	Delivering Saleable Products to the Market <i>Quality Standards • Transportation Methods: Pipeline, Truck, Rail & Shipping</i>
1415 - 1430	Recap
1430	<i>Lunch & End of Day Four</i>

Day 5

0730 - 0930	Case Study: From Reservoir to Market: Integrating Topics from Days 1-4 into a Holistic Field Development Plan
0930 - 0945	<i>Break</i>
0945 - 1145	Group Workshop: Designing a Facility Based on Provided Data: Applying Concepts in a Practical Scenario
1145 - 1230	Group Workshop: Designing a Facility Based on Provided Data: Applying Concepts in a Practical Scenario (cont'd)
1230 - 1245	<i>Break</i>
1245 - 1345	Exploring Future Trends in Production Facilities Design <i>Technological Advancements • Sustainability & Environmental Considerations</i>
1345 - 1400	Course Conclusion
1400 - 1415	POST-TEST
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Practical Sessions

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



Course Coordinator

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