COURSE OVERVIEW DE0461
Artificial Lift for Engineers

Course Title
Artificial Lift Engineers

Course Date/Venue
Please refer to page 4

Course Reference
DE0461

Course Duration
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.

The aim of this course is to introduce participants to both the physics of artificial lift technologies and the practicalities of the equipment.

This course first gives a basic overview of the artificial lift techniques commonly available today, and then goes into more detail on artificial lift techniques likely to be utilized in a typical offshore production environment. Gas lift, ESP's and jet pumps are covered in particular detail, and the course covers the principles, design, and operational aspects of each.

At the participants request, beam pumping can be covered in detail if the local environment demands this.

The course is run with a series of lectures from the trainer followed by exercises which cover the above aspects, including lift performance, gas lift valve design, optimising gas lift distribution, ESP pump design and the economics of artificial lift. The attendees are continually challenged to perform evaluations which reinforce the principles and practices of artificial lift.

Course Objectives

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

- Apply and gain an in-depth knowledge on artificial lifting design and optimization
- Explain natural flow, inflow performance, tubing flow performance and well performance, principles of gas lift
- Discuss gas lift valves and gas lift string design, operation of gas lift wells and surface facilities for gas lifts
- Optimize gas lift distribution, identify intermittent gas lifts
- Discuss the principles of electrical submersible pumps (ESP), pumps and motors, cables and surface equipment, pump design and operating ESP wells
- Explain the principles of jet pumping and jet pump design
- Manage artificial lifts

Who Should Attend

This course provides an overview of all significant aspects and considerations of artificial lifting design and optimization for engineers, supervisors and other technical staff.

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**.*

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

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 Date/Venue

Session(s)	Date	Venue
1	April 19-23, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
2	May 10-14, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
3	May 18-22, 2026	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
4	August 02-06, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
5	September 20-24, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
6	October 25-29, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
7	December 07-11, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
8	January 03-07, 2027	Meeting Plus 9, City Centre Rotana, Doha, Qatar
9	February 14-18, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Accommodation

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

Course Fee

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.
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.
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.
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.

Course Instructor

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. Bassem Nabawy, Post-Doc, PhD, MSc, BSc is a **Senior Petroleum Engineer** with over **20 years** of extensive experience within the **Oil** & **Gas**, **Refinery** and **Petrochemical** industries. His wide experience covers **Coring & Core Analysis**, **Core Handling & Sample Preparation**, **Conventional & Special Core Analysis**, **Petrophysical Core Analysis**, **SCAL** Analysis & Properties, **Coring & Wellsite**, **Porosity & Permeability, Wettability** Concepts, **Petroleum Geology**, **Petroleum Exploration** & Production, **Geological** Studies, **Geophysical** Characterization of Sedimentary Rocks, **Petrophysical Reservoir Rocks**, Rock Mechanics, Assessment of Mineral Resources, **Reservoir Engineering**, **Carbonate Reservoir**, Fractured **Reservoirs**, **Carbonate Reservoir**, Formation Evaluation & **Reservoir** Characterization, **Petroleum Geology**, **Hydrogeology**, **Well Logging**, Advanced **Well Log Interpretation**, Applied Well Log Interpretation, **Open Hole Logs** Evaluation, Pore Fabric, Applied Petrophysics, Petrographical & Geographical Studies, Microfacies Analysis, **SCAL** Analysis, Diagenetic Studies, Subsurface Water Equifier, Field Development Planning, Mineral Resources Assessment, Rock Mechanics, **Geophysical** Characterization, Sedimentary & Reservoir Rocks, Oil Exploration, Petrography, Minerology, SEM, Diagenetic History and Paleoenvironment Criteria. He is currently the **Professor** of **Applied Research & Senior Geology Instructor** wherein he responsible in teaching and developing courses in the area of coring and core analysis, hydrogeology and petroleum geology.

Throughout his career life, Dr. Bassem has gained his practical and field experience through his various significant positions as the **Principal Investigator**, **Co-Principal Investigator**, **Associate Professor**, **Senior Researcher**, **Instructor/Trainer**, **Assistant Journal Editor**, **Treasurer**, **Electric Coordinator** and **Assistant Researcher** wherein he was greatly involved in supervising thesis for different universities as well as organized and taught experimental courses in Geology and Petrophysical properties.

Dr. Bassem has a **Postdoctoral** in **Petrophysics** from the **Ecole Normale Superieur**, **Laboratoire de Geologie**, **Paris**, **France**. Further, he has a **PhD in Petrophysics**, a **Master** degree in **Hydrogeology & Petroleum Geology** and a **Bachelor** degree in **Geology**. Further, he is a **Certified Instructor/Trainer** and **Board Member** of the Egyptian Society of Applied Petrophysics (**ESAP**) and the Society of Petrophysicists and Well Log Analysts (**SPWLA**). He has further delivered numerous trainings, courses, seminars, conferences and workshops worldwide

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 – 0930	***Overview of Artificial Lift Techniques***
0930 – 0945	*Break*
0945 – 1030	***Natural Flow***
1030 – 1130	***Inflow Performance***
1130 – 1230	***Tubing Flow Performance***
1230 – 1245	*Break*
1245 – 1420	***Well Performance***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Gas Lift***
0930 – 0945	*Break*
0945 – 1030	***Principles of Gas Lift***
1030 – 1130	***The Equilibrium Curve***
1130 – 1230	***Gas Lift Valves***
1230 – 1245	*Break*
1245 – 1420	***Gas Lift String Design***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Operating Gas Lift Wells***
0930 – 0945	*Break*
0945 – 1030	***Surface Facilities for Gas Lift***
1030 – 1130	***Optimizing Lift Gas Distribution***
1130 – 1230	***Intermittent Gas Lift***
1230 – 1245	*Break*
1245 – 1420	***Electrical Submersible Pumps***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Principles of Electrical Submersible Pumping***
0930 – 0945	*Break*
0945 – 1030	***Pumps & Motors***
1030 – 1130	***Cables & Surface Equipment***
1130 – 1230	***Pump Design***
1230 – 1245	*Break*
1245 – 1420	***Operating ESP Wells***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0830	***Hydraulic Jet Pumps***
0830 – 0930	***Principles of Jet Pumping***
0930 – 1000	***Jet Pump Design***
1000 - 1015	*Break*
1015 - 1115	***Managing Artificial Lift***
1115 – 1130	***Course Conclusion***
1130 – 1145	***POST-TEST***
1145 – 1200	*Presentation of Course Certificates*
1200	*Lunch & End of Course*

Practical Sessions

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

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org