

## COURSE OVERVIEW DE0072-4D Advanced Completion Design & Operation

### Course Title

Advanced Completion Design & Operation

### Course Date/Venue

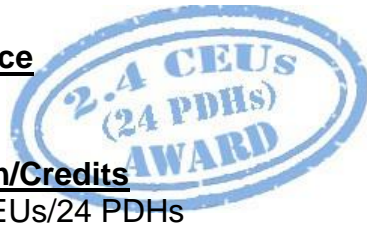
October 07-10, 2024/Club B Meeting Room,  
Ramada Plaza by Wyndham Istanbul City Center,  
Istanbul, Turkey

### Course Reference

DE0072-4D

### 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 an advanced and up-to-date overview of advanced completion technology. It covers the well completion design, practices and strategies; the main factors influencing completion design that include parameters related to the well's purpose, environment, drilling, reservoir, production and completion techniques; the overall approach to a well's flow capacity; the major types of completion configurations; the main phases in completion including drilling and casing the pay zone; and the evaluation and restoration of cement job including remedial cementing.

During this interactive course, participants will learn the perforation, treating the pay-zone and sand control; the special case of horizontal wells and the general configuration of flowing well equipment; the wellheads/chokes/subsurface safety valves and flow control equipment; the production well-head, production string or tubing and packers; and the material selection, downhole equipment and subsurface safety valves.

### **Course Objectives**

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

- Apply and gain an advanced knowledge on advanced completion technology
- Employ well completion design, practices and strategies
- Identify the main factors influencing completion design that include parameters related to the well's purpose, environment, drilling, reservoir, production and completion techniques
- Describe the overall approach to a well's flow capacity and identify the major types of completion configurations
- Recognize the main phases in completion including drilling and casing the pay zone
- Evaluate and restore cement job including remedial cementing
- Illustrate perforating, treating the pay zone and sand control
- Explain the special case of horizontal wells and apply the general configuration of flowing well equipment
- Recognize wellheads/chokes/subsurface safety valves and flow control equipment
- Discuss the production well-head, production string or tubing and packers
- Identify material selection, downhole equipment and subsurface safety valves

### **Who Should Attend**

This course covers systematic techniques and methodologies on advanced completion technology for senior engineers, drilling engineers, reservoir engineers, well, production, completion and petroleum engineers, supervisors and geologists.

### **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: -

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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 **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.

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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**. 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.



### 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:



**Mr. Victor Saran, MSc, BSc**, is a **Senior Drilling & Petroleum Engineer** with over **40 years** of **offshore & onshore** experience within the **Oil & Gas** and **Petroleum** industries. His wide expertise covers **Wellhead Testing & Operations, Well Stimulation & Reservoir Management, Well Performance, Well Servicing, Well Killing Procedures, Well Completion, Well Fracturing, Well Testing, Acid Additives, Perforating Techniques, Sandstone Acidizing, Carbonate Acidizing, Acid Fracturing, Production Engineering, Well Monitoring & Testing, Applied Reservoir Engineering, Water Flooding, Workover & Completions, Injection Systems, Artificial Lift Systems, Gas Lift, ESP, Rod Pumping, Production Testing & Optimization, Slickline and Electric Line Operations, Perforating & Logging, Coiled Tubing Operations, Nozzles, Motors, Deposits Removal & Inhibition and Asphaltnes-Sulphates, Workover Completion, Water Injection & Gas Lift, Nodal Analysis, Drill Stem Testing, H<sub>2</sub>S Crude Oil and Oil & Gas Production**. Further, he is also well-versed in risk assessments, pipelines construction, pump & loading terminals, material and services procurement, budgeting, contracts & logistics, safety and personnel issues, tendering procedures, budget and work program, cost control–cost recovery, selection of materials and services and quality control. Currently, he is the **Country Manager of Energean Oil & Gas** wherein he is responsible in organizing and supervising the drilling of exploration wells and well connections and testing.

During Mr. Saran's life, he has gained his practical and field experience through his various significant positions as the **Completions Consultant, Lecturer/Instructors, Part-Time Assistant Lecturer, Part-Time Instructor, Technical Consultant, Drilling & Workover Manager, Production Manager, Production Engineer, Petrochemical Engineer, Mechanical Engineer, Petroleum Services Engineer** for numerous international companies and universities that includes **Lukoil Neftochim, J&P Avax, Kavala Oil Greece, North Aegean Petroleum Company, Petrola International, Dowell Schlumberger, Technological Institute of Kavala, University of Thessaloniki and University of Crete**.

Mr. Saran has a **Master's degree in Fuel Technology** and a **Bachelor's degree in Mechanical Engineering** from the **University of Portsmouth Polytechnic, UK** and the **University of Westminster London, UK** respectively. Further, he is a **Certified Instructor/Trainer, a Certified Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and has conducted numerous trainings, workshops and conferences worldwide.





**Course Fee**

**US\$ 7,250** per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), 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: Monday, 07<sup>th</sup> of October 2024**

0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	<b>PRE-TEST</b>
0830 - 0930	<b>Basic Well Completion Design, Practices &amp; Strategies</b>
0930 - 0945	Break
0945 - 1030	<b>Main Factors Influencing Completion Design</b> Parameters Related to the Well's Purpose • Parameters Related to the Environment • Parameters Related to Drilling • Parameters Related to Reservoir • Parameters Related to Production • Parameters Related to Completion Techniques • Synthesis: How Completion is Designed?
1030 - 1230	<b>Overall Approach to a Well's Flow Capacity</b> Base Equations • Analysis of the Different Terms and Resulting Conclusions • Performance Curves • Synthesis
1230 - 1245	Break
1245 - 1330	<b>Major Types of Completion Configurations</b> Basic Requirements • Pay Zone-Borehole Connection: Basic Configurations • Main Configurations of Production String(s)
1330 - 1420	<b>Main Phases in Completion</b> Checking and Conditioning the Borehole • Remedial Cementing • Re-Establishing Pay Zone-Borehole Communication • Well Testing • Treating the Pay Zone • Equipment Installation • Putting the Well on Stream and Assessing Performance • Moving the Rig • Operations to Be Performed at a Later Date: Measurements, Maintenance, Workover and Abandonment
1420 - 1430	<b>Recap</b> 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: Tuesday, 08<sup>th</sup> of October 2024**

0730 - 0930	<b>Drilling &amp; Casing the Pay Zone</b> Well Safety • Fluids Used to Drill in the Pay Zone • Drilling and Casing Diameters • Casing and Cementing
0930 - 0945	Break
0945 - 1100	<b>Evaluating &amp; Restoring the Cement Job</b> Evaluating the Cement Job • Remedial Cementing





1100 – 1230	<b>Perforating</b> <i>Shaped Charges • Main Parameters Affecting the Productivity of the Zone Produced By Perforating • Perforating Methods and Corresponding Types of Guns • Specific Points in the Operating Technique</i>
1230 – 1245	<i>Break</i>
1245 – 1330	<b>Treating the Pay Zone</b> <i>Problems Encountered • Main Types of Remedial Action for Poor Consolidation: Sand Control • Main Types of Remedial Action for Insufficient Productivity: Well Stimulation</i>
1330 – 1420	<b>Sand Control</b>
1420 – 1430	<b>Recap</b> <i>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</i>
1430	<i>Lunch &amp; End of Day Two</i>

**Day 3: Wednesday, 09<sup>th</sup> of October 2024**

0730 – 0930	<b>The Special Case of Horizontal Wells</b> <i>Advantages in Producing Reservoirs • Problems Specific to the Pay-Zone-Borehole Connection</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>General Configuration of Flowing Well Equipment</b>
1100 – 1230	<b>Wellheads/Chokes/Subsurface Safety Valves &amp; Flow Control Equipment</b>
1230 – 1245	<i>Break</i>
1245 – 1330	<b>The Production Wellhead</b> <i>Hanging (and Securing) the Tubing • The Christmas Tree (Xmas Tree)</i>
1330 – 1420	<b>The Production String or Tubing</b> <i>Tubing Characteristics • Choosing the Tubing • Corrosion &amp; Erosion Inflow &amp; Tubing Performance • Tubing Design &amp; Packer Setting &amp; Retrieval</i>
1420 – 1430	<b>Recap</b> <i>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</i>
1430	<i>Lunch &amp; End of Day Three</i>

**Day 4: Thursday, 10<sup>th</sup> of October 2024**

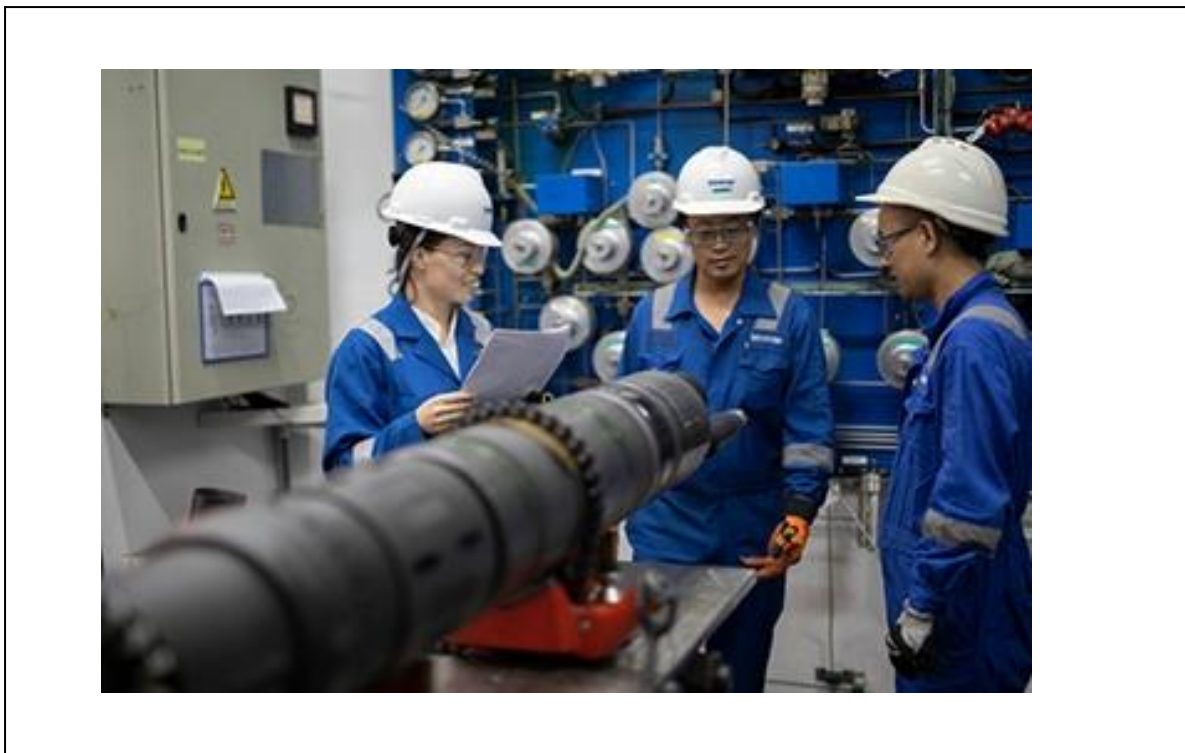
0730 – 0930	<b>Packers</b> <i>Packer Fluids (or Annular Fluids) • The Main Packer Type • Choosing the Packer • Permanent Production Packers • Retrievable Packers • Packer Selection &amp; Tubing Forces</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>Material Selection</b>
1100 – 1230	<b>Downhole Equipment</b> <i>Circulating Devices • Landing Nipples • Other Downhole Equipment</i>



1230 - 1245	<i>Break</i>
1245 - 1345	<b><i>Subsurface Safety Valves</i></b> <i>Subsurface Controlled Subsurface Safety Valves (SSCSV) • Surface Controlled Subsurface Safety Valves (SCSSV)</i>
1345 - 1400	<b><i>Course Conclusion</i></b> <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1400 - 1415	<b><i>POST-TEST</i></b>
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>

### **Practical Sessions**

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



### **Course Coordinator**

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