



COURSE OVERVIEW PE0278 Liquefied Natural Gas Process

Course Title

Liquefied Natural Gas Process

Course Date/Venue

July 14-18, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

PE0278

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 delegates with a detailed and up-to-date overview of LNG Process Plant Operations. Further, the course will also cover LNG processes, gas treatment, chemical and physical properties, purifications and first pretreated and refrigeration technology; and the removal of acid gas, sulfur component, sour gases, H₂S problems, gas dehydrations by glycol units and hydration problems, fractionation for heavier hydrocarbon separated, process selection, equipment/compressors and drivers and heat exchangers/pumps.



During this interactive course, participants will learn the utility requirements, fuel gas, cooling medium (water or air), heating medium (steam or hot oil system), instrument air and nitrogen, plant safety and LNG product specifications; the LNG chain and flare systems, shutdown and trips as well as LNG storage and loading (shipping; and environmental impact and LNG hazards, standards of flash fire and local regulations as well as marine procedures.

Course Objectives

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

- Apply and gain an-in depth knowledge on LNG process plant operations
- Define LNG and discuss LNG processes, gas treatment, chemical and physical properties, purifications and first pretreated and refrigeration technology
- Determine the removal of acid gas, sulfur component, sour gases, H₂S problems, gas dehydrations by glycol units and hydration problems, fractionation for heavier hydrocarbon separated, process selection, equipment/compressors and drivers and heat exchangers/pumps
- Identify the utility requirements, fuel gas, cooling medium (water or air), heating medium (steam or hot oil system), instrument air and nitrogen, plant safety and LNG product specifications
- Explain the LNG chain and flare systems, shutdown and trips as well as LNG storage and loading (shipping)
- Evaluate and analyze environmental impact and LNG hazards, standards of flash fire and local regulations as well as marine procedures

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 is intended for those directly involved in gas processing operations. However, the course is specifically designed to be of substantial benefit to both technical and non-technical personnel employed in the activities that support the industry. Managers, engineers, marketing staff and manufacturer’s representatives, as well as those involved in sales and services to the natural gas industry will receive considerable benefit from the broad overview.

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: -

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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 Fee

US\$ 5,500 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(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. Mervyn Frampton, BSc, PMI-PMP, CSSBB, is a **Senior Process Engineer** with over **30 years** of industrial experience within the **Oil & Gas, Refinery, Petrochemical** and **Utilities** industries. His expertise lies extensively in the areas of **Process Unit Operations & Maintenance, Operations Asset Process Plant Start-up & Commissioning, Process Plant Monitoring, Process Plant Optimization, Revamping & Debottlenecking, Process Plant Troubleshooting & Engineering Problem Solving, Integrity, Flare, Blowdown & Pressure Relief Systems** Operation, Maintenance & Troubleshooting, Dynamics of the **Petrochemicals Industry**, Understanding the **Global Petrochemical Industry, Petrochemicals Analysis, Naphtha & Condensate in Petrochemicals, Feedstock Handling & Storage, Natural Gas Liquids & Petrochemical Industry and Markets, Refinery & Process Industry, Refinery Optimization, Refinery Operations Troubleshooting, Refinery Production Operations, Refinery Process Safety, Process Safety Design, Petroleum Refinery Process, Asset Operational Integrity, Refinery Induction, Crude Distillation, Crude Oil Properties, Distillation Column Operation & Control, Oil Movement Storage & Troubleshooting, Root Cause Analysis (RCA) for Process & Equipment Failures, Process Equipment Design, Applied Process Engineering Elements, Catalyst Selection & Production Optimization, Operations Abnormalities & Plant Upset, Clean Fuel Technology & Standards, Oil & Gas Field Commissioning Techniques, Pressure Vessel Operation, Gas Processing, Chemical Engineering, Process Reactors Start-Up & Shutdown, Gasoline Blending for Refineries, Urea Manufacturing Process Technology, Continuous Catalytic Reformer (CCR), De-Sulfurization Technology, Advanced Operational & Troubleshooting Skills, Principles of Operations Planning, Rotating Equipment Maintenance & Troubleshooting, Hazardous Waste Management & Pollution Prevention, Heat Exchangers & Fired Heaters Operation & Troubleshooting, Energy Conservation Skills, Catalyst Technology, Chemical Analysis, Process Plant, Commissioning & Start-Up, Alkylation, Hydrogenation, Dehydrogenation, Isomerization, Hydrocracking & De-Alkylation, Fluidized Catalytic Cracking, Catalytic Hydrodesulphuriser, Kerosene Hydrotreater, Thermal Cracker, Catalytic Reforming, Polymerization, Polyethylene, Polypropylene, Pilot Water Treatment Plant, Gas Cooling, Cooling Water Systems, Effluent Systems, Material Handling Systems, Gasifier, Gasification, Coal Feeder System, Sulphur Extraction Plant, Acid Plant Revamp and Crude Pumping. Further, he is also well-versed in HSE Leadership, Project and Programme Management, Project Coordination, Project Cost & Schedule Monitoring, Control & Analysis, Team Building, Relationship Management, Quality Management, Performance Reporting, Project Change Control, Commercial Awareness and Risk Management.**

During his career life, Mr. Frampton held significant positions as the **Site Engineering Manager, Senior Project Manager, Project Engineering Manager, Construction Manager, Site Manager, Area Manager, Procurement Manager, Factory Manager, Technical Services Manager, Senior Project Engineer, Project Engineer, Assistant Project Manager, Handover Coordinator and Engineering Coordinator** from various international companies such as the **Fluor Daniel, KBR South Africa, ESKOM, MEGAWATT PARK, CHEMEPIC, PDPS, CAKASA, Worley Parsons, Lurgi South Africa, Sasol, Foster Wheeler, Bosch & Associates, BCG Engineering Contractors, Fina Refinery, Sapref Refinery, Secunda Engine Refinery** just to name a few.

Mr. Frampton has a **Bachelor's degree in Industrial Chemistry** from **The City University in London**. Further, he is a **Certified Project Management Professional (PMI-PMP)**, a **Certified Six Sigma Black Belt (CSSBB)** from **The International Six Sigma Institute**, a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management (ILM)**, a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, workshops, conferences and seminars internationally.

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, 14th of July 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0900	What is the LNG?
0900 – 0930	The LNG Process
0930 – 0945	Break
0945 – 1015	Gas Treatment
1015 – 1100	Chemical & Physical Properties
1100 – 1230	Purifications & First Pretreated
1230 – 1245	Break
1245 – 1420	Refrigeration Technology
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2: Tuesday, 15th of July 2025

0730 – 0830	Acid Gas Removal & Sulfur Component Sour Gases
0830 – 0930	H₂S Problems
0930 – 0945	Break
0945 – 1045	Gas Dehydrations by Glycol Units & Hydration Problems
1045 – 1130	Fractionation for Heavier Hydrocarbon Separated
1130 – 1230	Process Selection
1230 – 1245	Break
1245 – 1320	Equipment / Compressors & Drivers
1320 – 1420	Heat Exchangers / Pumps
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Wednesday, 16th of July 2025

0730 – 0830	Utility Requirements
0830 – 0930	Fuel Gas, Cooling Medium (Water or Air)
0930 – 0945	Break
0945 – 1100	Heating Medium (Steam or Hot Oil System)
1100 – 1230	Instrument Air & Nitrogen
1230 – 1245	Break
1245 – 1320	Plant Safety
1320 – 1420	The LNG Product Specifications
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Thursday, 17th of July 2025

0730 – 0930	<i>The LNG Chain</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Flare System</i>
1100 – 1215	<i>Shutdown & Trips</i>
1215 – 1230	<i>Break</i>
1230 – 1430	<i>LNG Storage & Loading (Shipping)</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Four</i>

Day 5: Friday, 18th of July 2025

0730 – 0930	<i>Environmental Impact</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>LNG Hazards</i>
1100 – 1215	<i>Flash Fire & Local Regulations & Standards</i>
1215 – 1230	<i>Break</i>
1230 – 1345	<i>Marine Procedures</i>
1345 – 1400	<i>Course Conclusion</i>
1400 – 1415	<i>POST-TEST</i>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & 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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