

**COURSE OVERVIEW PE0665**

**Process Engineering for Non-Process Engineering Professionals**

**Course Title**

Process Engineering for Non-Process Engineering Professionals

**Course Date/Venue**

Session 1: July 14-18, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE  
 Session2: December 21-25, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



**Course Reference**

PE0665

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs



**Course Description**



***This practical and highly-interactive course includes real-life case studies 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 process engineering. It covers the thermodynamics, fluid flow, phase equilibria and phase separation; and hydrocarbon processing including distillation, gas dehydration, gas liquid filtration and refrigeration.



By the end of the course, participants will have a general understanding of process engineering theory, hydrocarbon processing methods and technologies, process simulation, and hydrocarbon processing equipment, as applied in upstream oil and gas production operations. They will be able to carryout LNG and NGL products and processes, gas compression, turbo expansion and liquid expanders; illustrate the removal of sulphur components, CO<sub>2</sub>, mercury removal; identify process chemicals and design and operate the principles of process equipment; and recognize the process equipment and systems.



Further, participants will be assessed to check the extent of their learning while on the course. Please note that an evaluation of the success of this course may include an analysis of the graduates' assessment results.

### Course Objectives

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

- Apply and gain a good working knowledge on process engineering
- Discuss process engineering covering thermodynamics, fluid flow, phase equilibria and phase separation
- Employ hydrocarbon processing including distillation, gas dehydration, gas liquid filtration and refrigeration
- Carryout LNG and NGL products and processes, gas compression, turbo expansion and liquid expanders
- Illustrate the removal of sulphur components, CO<sub>2</sub> and mercury removal
- Identify process chemicals and design and operate the principles of process equipment
- Recognize the process equipment and systems comprising of PFD's and P&ID's, process measurement, basics of process model simulation and data used in process simulation and their sources

### 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 process engineering for supervisors, operations engineers, control engineers, and other field and surface facilities related engineering jobs.

### 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\$ 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 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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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.

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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.

**Accommodation**

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

### 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** 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 **Distillation Column Operation & Control, Oil Movement Storage & Troubleshooting, Process Equipment Design, Applied Process Engineering Elements, Process Plant Optimization, Revamping & Debottlenecking, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Monitoring, Catalyst Selection & Production Optimization, Operations Abnormalities & Plant Upset, Process Plant Start-up & Commissioning, Clean Fuel Technology & Standards, Flare, Blowdown & Pressure Relief Systems, 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, Refinery & Process Industry, 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, Crude Distillation Unit, 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 degree** in **Industrial Chemistry** from **The City University** in **London**. Further, he is a **Certified Instructor/Trainer, a Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and has delivered numerous trainings, courses, workshops, conferences and seminars internationally.

**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	<b>PRE-TEST</b>
0830 – 0930	<b>Process Engineering</b> Thermodynamics
0930 – 0945	Break
0945 – 1100	<b>Process Engineering (cont'd)</b> Fluid Flow
1100 – 1230	<b>Process Engineering (cont'd)</b> Phase Equilibria
1230 – 1245	Break
1245 – 1420	<b>Process Engineering (cont'd)</b> Phase Separation
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**

0730 – 0900	<b>Hydrocarbon Processing</b> Distillation
0900 – 0915	Break
0915 – 1100	<b>Hydrocarbon Processing (cont'd)</b> Gas Dehydration
1100 – 1230	<b>Hydrocarbon Processing (cont'd)</b> Gas Liquid Filtration
1230 – 1245	Break
1245 – 1420	<b>Hydrocarbon Processing (cont'd)</b> Refrigeration
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 Two

**Day 3**

0730 – 0930	<b>Hydrocarbon Processing (cont'd)</b> LNG & NGL Products & Processes
0930 – 0945	Break
0945 – 1100	<b>Hydrocarbon Processing (cont'd)</b> Gas Compression
1100 – 1215	<b>Hydrocarbon Processing (cont'd)</b> Turbo Expansion

1215 - 1230	<i>Break</i>
1230 - 1420	<b>Hydrocarbon Processing (cont'd)</b> <i>Liquid Expanders</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**

0730 - 0930	<b>Hydrocarbon Processing (cont'd)</b> <i>Removal of Sulphur Components &amp; CO2</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<b>Hydrocarbon Processing (cont'd)</b> <i>Mercury Removal</i>
1100 - 1215	<b>Hydrocarbon Processing (cont'd)</b> <i>Process Chemicals</i>
1215 - 1230	<i>Break</i>
1230 - 1420	<b>Process Equipment &amp; Systems</b> <i>Design &amp; Operation Principles of Process Equipment</i>
1420 - 1420	<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>
1420 - 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

**Day 5**

0730 - 0930	<b>Process Equipment &amp; Systems (cont'd)</b> <i>PFD's &amp; P&amp;ID's</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<b>Process Equipment &amp; Systems (cont'd)</b> <i>Process Measurement</i>
1100 - 1215	<b>Process Simulation</b> <i>Basics of Process Model Simulation</i>
1215 - 1230	<i>Break</i>
1230 - 1345	<b>Process Simulation (cont'd)</b> <i>Data used in Process Simulation and their Sources</i>
1345 - 1400	<b>Course Conclusion</b>
1400 - 1415	<b>POST-TEST</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**

Mari Nakintu, Tel: +971 2 30 91 714, Email: [mari1@haward.org](mailto:mari1@haward.org)