COURSE OVERVIEW PE0665
Process Engineering for Non-Process Engineers

Course Title
Process Engineering for Non-Process Engineers

Course Date/Venue
Session 1: October 13-17, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
Session 2: October 20-24, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, 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_2, 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_2 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

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.

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. Henry Beer is a **Senior Process Engineer** with over **30 years** of indepth industrial experience within the **Petrochemical**, **Oil & Gas** industries specializing in **Hydrocarbon Process** Equipment, **DOX Unit** Operation & Troubleshooting, **Polyethylene & Polypropylene** Processing, **Oil Movement** Storage & Troubleshooting, **Power Plant Chemistry**, **Fuel Quality** Monitoring System Fundamentals, **Liquid Bulk Cargo Handling**, **Oil Refinery Cost Management**, **Flare & Blowdown** Operation, **Pressure Relief Systems** Maintenance & Troubleshooting, Refinery **SRU**, **Tail Gas** Treating, **Sour Water & Amine Recovery** Units, **Propylene** Compressor and Turbine, **Clean Fuel** Technology & Standards, Principles of **Operations Planning**, **Heat Exchangers & Fired Heaters** Operation & Troubleshooting, **Plastic Extrusion Technology** Operation & Troubleshooting, **Chemical Engineering** for Non-Chemical Engineers, **Process Plant** Troubleshooting, **Process Plant Optimization** Technology, **Engineering Problem Solving**, **Process Plant** Performance & Efficiency, **Process Plant** Start-up & Shutdown, **Process Plant** Commissioning, **Process Plant** Turn-around & Shutdown, **Pumps & Compressors** Troubleshooting, **Fired Heaters & Air Coolers** Maintenance, **Pressure Vessels & Valves** Repair, **Polymers**, **Plastics**, **Polyolefin** & **Catalysts**, **Polymerization**, **Thermal Analysis Techniques**, **Rheology**, **Thermoplastics**, **Thermosets**, **Coating Systems** and **Fibre Reinforced Polymer Matrix Composites**. Further, he is also well-versed in **Water Hydraulic Modelling**, **Efficient** Shutdowns, Turnaround & Outages, **Pump** Selection and Installation, Operation and Maintenance of **Pumps**, **Demand & Supply** Management, **Catalyst Manufacturing Techniques**, **Fuel Systems Management**, **Aviation Fuel**, **Diesel**, **Jet Fuel**, **Petrol** and **IP Octane**, **Cetane Control** and related Logistics, Road, Rail and Pipeline Distribution, **Process Design** and **Optimisation**, **Boiler Feed Water Preparation**, **Flocculation Sedimentation**, **Hot Lime Water Softening Processes**, **Desalination Processes**, **Reverse Osmosis**, **Molecular Sieves**, activated **Sludge Aerobic/Anaerobic**, **Sludge Removal** and **Incineration Process Control**, **Domestic Sewage Plants Optimisation**, **Process Cooling Water System**, **High Pressure** and **Low Pressure Tank Farm Management**, **Hydrocarbon** and **Chemical products** and **GTL** (**Gas to Liquids**).

During his career life, Mr. Beer holds significant key positions such as the **Director**, **Global Commissioning Manager**, **Process Engineering Manager**, **Senior Business Analyst**, **Process Engineer**, **Chemical Engineer**, **Senior Technician**, **Technical Sales Engineer**, **Entrepreneur**, **Financial Consultant**, **Business Analyst**, **Business Financial Planner** and **Independent Financial Planner** to various international companies such as the **Sasol**, **SASOLChem**, **TAG Solvents**, **Virgin Solvent Products**, **SARS** & **SAPIA** (**South African Petroleum Industry Association**) and **RFS Financial Services** (**Pty**) **Ltd**.

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	***Process Engineering*** *Thermodynamics*
0930 – 0945	*Break*
0945 – 1100	***Process Engineering (cont'd)*** *Fluid Flow*
1100 – 1230	***Process Engineering (cont'd)*** *Phase Equilibria*
1230 – 1245	*Break*
1245 - 1420	***Process Engineering (cont'd)*** *Phase Separation*
1420 - 1430	***Recap*** *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	***Hydrocarbon Processing*** *Distillation*
0900 – 0915	*Break*
0915 – 1100	***Hydrocarbon Processing (cont'd)*** *Gas Dehydration*
1100 – 1230	***Hydrocarbon Processing (cont'd)*** *Gas Liquid Filtration*
1230 – 1245	*Break*
1245 – 1420	***Hydrocarbon Processing (cont'd)*** *Refrigeration*
1420 – 1430	***Recap*** *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	***Hydrocarbon Processing (cont'd)*** *LNG & NGL Products & Processes*
0930 - 0945	*Break*
0945 – 1100	***Hydrocarbon Processing (cont'd)*** *Gas Compression*
1100 – 1215	***Hydrocarbon Processing (cont'd)*** *Turbo Expansion*

1215 – 1230	*Break*
1230 - 1420	***Hydrocarbon Processing (cont'd)*** *Liquid Expanders*
1420 - 1430	***Recap*** *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 Three*

Day 4

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

Day 5

0730 – 0930	***Process Equipment & Systems (cont'd)*** *PFD's & P&ID's*
0930 - 0945	*Break*
0945 – 1100	***Process Equipment & Systems (cont'd)*** *Process Measurement*
1100 – 1215	***Process Simulation*** *Basics of Process Model Simulation*
1215 – 1230	*Break*
1230 - 1345	***Process Simulation (cont'd)*** *Data used in Process Simulation and their Sources*
1345 - 1400	***Course Conclusion***
1400 - 1415	***POST-TEST***
1415 - 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

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

Course Coordinator

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