## COURSE OVERVIEW PE0811

# Hydro Treating & Hydrocracker Process

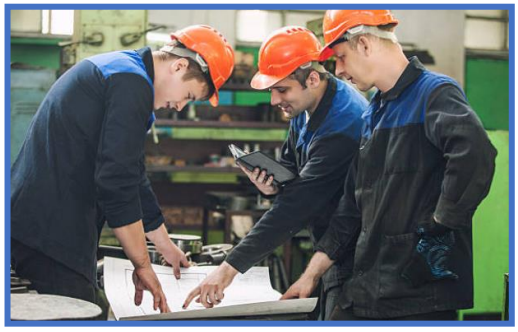
**Course Title**
Hydro Treating & Hydrocracker Process

**Course Date/Venue**
Session 1: February 11-15, 2024/Kizkulesi, Crown Plaza Istanbul Asia Hotels & Convention Center, Istanbul, Turkey
Session 2: March 03-07, 2024/Oryx Meeting Room, Doubletree By Hilton Doha-Al Sadd, Doha, Qatar

**Course Reference**
PE0811

**Course Duration/Credits**
Five days/3.0 CEUs/30 PDHs

**Course Description**



***This practical and highly-interactive course includes real-life case s tudies 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 a detailed and up-to-date overview of hydro treating and hydrocracker process. It covers the hydrotreating including chevron lummus global RDS/VRDS and ebullated bed bottom of the barrel hydroconversion LC-fining process; the selection of hydrogen processes; the identification of UOP unionfining technology and process; and the UOP catalytic dewaxing process and UOP unisar process for saturation of aromatics.

During this interactive course, participants will learn the startup, shutdown and troubleshooting on hydrotreating; the catalytic reforming covering UOP platform process, start up, shutdown and troubleshooting; and the hydro cracking as well as isocracking of superior fuels and lubes, UOP unicracking process, start up, shutdown and troubleshooting.

## Course Objectives

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

- Apply and gain an in-depth knowledge on hydro treating and hydrocracker process
- Discuss hydrotreating including chevron lummus global RDS/VRDS and ebullated bed bottom of the barrel hydroconversion LC-fining process
- Select hydrogen processes and identify UOP unionfining technology and process, UOP catalytic dewaxing process and UOP unisar process for saturation of aromatics
- Perform start up, shutdown and troubleshooting on hydrotreating
- Carryout catalytic reforming covering UOP platform process, start up, shutdown and troubleshooting
- Determine hydro cracking as well as isocracking of superior fuels and lubes, UOP unicracking process, start up, shutdown and troubleshooting

## Who Should Attend

This course is intended for personnel involved in refinery process engineering, unit operations, research and development, sales and other refinery technical service. Process engineers from design and construction companies as well as those who provide products and services to the petroleum refining industry should also find the program very useful and informative.

## 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

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| Istanbul | **US$ 6,000** per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day. |
| Doha | **US$ 6,000** per Delegate. 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: -

- 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.

- 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.

## 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. Mohammad Hamami**, is a **Senior Process Engineer** with an extensive practical experience within the **Oil**, **Gas**, **Refinery**, **Petrochemical** and **Power** industries. His experience covers **Clean Fuel** Technology & Standards, **Clean Fuel** Specification, Emission Regulation, **Crude Oil** Production, **Desulphurization**, Synthesis **Gas Production**, **Naphtha** Isomerization, **Diesel Fuel Additives**, **Storage Tanks** Filtration, **Fuel Quality** Inspection, **Process Plant** Troubleshooting & Engineering Problem Solving, **Process Equipment** Operation, **Process Plant** Operation, **Process Plant** Start-up & Commissing, **Process Plant** Optimization, **Oil & Gas Field** Operation, **Oil Movement**, Storage & Troubleshooting, **Petroleum Refinery** Process, **Process Reactor** Operation & Troubleshooting, **LPG Oil & Gas** Operation & Troubleshooting, **Crude Oil & LNG** Storage, **LNG & LPG** Plants Gas Processing, **Refinery Process** Operations Technology, **Liquid Bulk Cargo Handling**, **Gas Conditioning** & Processing Technology, **Distillation Column** Design & Operation and **Gasoline & Diesel Fuel** Technology. Further he is also well-versed in **Refinery** Operational Economics & Profitablity, Aromatics Manufacturing Process, **Hydrogen Production** Operation, **Steam Reforming** Technology, **Gas Treating**, **Hydro-treating & Hydro-Cracking**, **Catalyst** Material Handling, Gas Sweetening & Sulfur Recovery, Hydro Carbon Dew Point (HCDP) Control, **Heat Exchangers** & Fired Heaters, **Amine** Gas Sweetening, **Plastic Additives** Selection & Application, **Crude & Vaccum** Process Technology, **Flare & Pressure Relief Systems**, Stock Management & **Tank Dipping** Calculation, **NGL Recovery & Fractionation**, **Refrigerant & NGL Extraction** and **Catalytic Craking & Reforming.**

During his long professional carreer, Mr. Mohammad worked as a **Refinery Manager**, **Operations Manager**, **Section Head/Superintendent** and **Process Engineer** for **Process Units**, **Utilities & Oil Movement** in various companies. He has been responsible for a number of **technological-driven world-scale hydrocarbon processing projects** from **beginning to successful start-up**.

Mr. Mohammad has a **Bachelor's** degree in **Chemical Engineering**. He is an **active member** of the **American Institute of Chemical Engineers** (**AIChE**) and has presented **technical papers** at its **several national meetings**. He has largely participated in the **start-up of seven world-scale process plants** which made him an **International Expert** in **Process Plant Start-Up** and **Oil Movement** and a **Certified Instructor/Trainer**.

## 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***

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| *0730 – 0800* | *Registration & Coffee* |
| *0800 – 0815* | *Welcome & Introduction* |
| *0815 – 0830* | ***PRE-TEST*** |
| *0830 – 0930* | ***Hydrotreating*** |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Chevron Lummus Global RDS/VRDS Hydrotreating – Transportation Fuels from the Bottom of the Barrel*** |
| *1100 – 1230* | ***Selective Hydrogen Processes*** |
| *1230 – 1245* | *Break* |
| *1245 – 1330* | ***UOP Unionfining Technology*** |
| *1330 - 1420* | ***UOP RCD Unionfining Process*** |
| *1420 – 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day One* |

***Day 2***

| | |
|---|---|
| *0730 – 0900* | ***UOP Catalytic Dewaxing Process*** |
| *0900 – 0915* | *Break* |
| *0915 – 1100* | ***UOP Unisar Process for Saturation of Aromatics*** |
| *1100 – 1230* | ***Chevron Lummus Global Ebullated Bed Bottom-of-the-Barrel Hydroconversion (LC-Fining) Process*** |
| *1230 – 1245* | *Break* |
| *1245 – 1320* | ***Hydrotreating Start-up*** |
| *1320 - 1420* | ***Hydrotreating Shutdown*** |
| *1420 – 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Two* |

***Day 3***

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|---|---|
| *0730 – 0930* | ***Hydrotreating Troubleshooting*** |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Catalytic Reforming*** |
| *1100 – 1215* | ***UOP Platforming Process*** |
| *1215 – 1230* | *Break* |
| *1230 – 1430* | ***Catalytic Reforming Start-up*** |
| *1420 – 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Three* |

***Day 4***

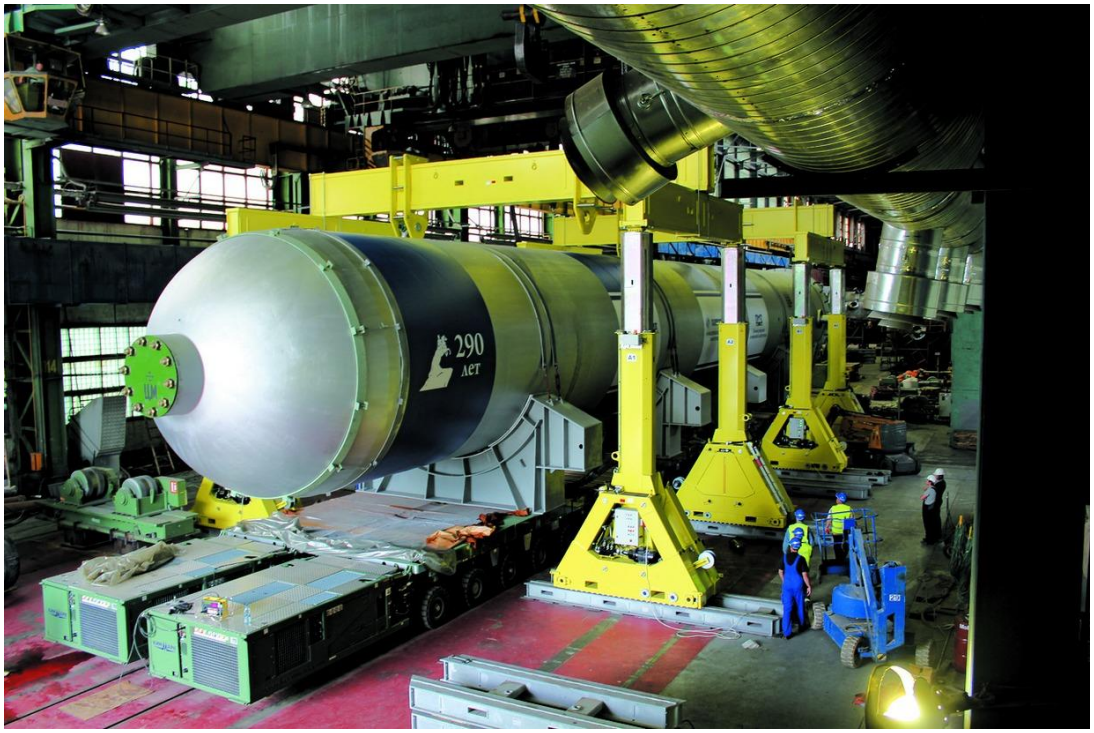
| | |
|---|---|
| *0730 – 0930* | ***Catalytic Reforming Shutdown*** |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Catalytic Reforming Troubleshooting*** |
| *1100 – 1215* | ***Hydro Cracking*** |
| *1215 – 1230* | *Break* |
| *1230 – 1430* | ***Isocracking – Hydrocracking for superior Fuels & Lubes*** |
| *1420 – 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Four* |

***Day 5***

| | |
|---|---|
| *0730 – 0930* | ***UOP Unicracking Process for Hydrocracking*** |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Hydro Cracking Start-up*** |
| *1100 – 1215* | ***Hydro Cracking Shutdown*** |
| *1215 – 1230* | *Break* |
| *1230 – 1345* | ***Hydro Cracking Troubleshooting*** |
| *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

Kamel Ghanem, Tel: +971 2 30 91 714, Email: kamel@haward.org