COURSE OVERVIEW TM0198
Process Excellence in Energy

Course Title
Process Excellence in Energy

Course Date/Venue
Session 1: June 15-19, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: November 10-14, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
TM0198

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 participants with a detailed and up-to-date overview of Process Excellence in Energy. It covers the key concepts of process excellence, Lean, Six Sigma and total quality management (TQM); the process flow diagrams, mapping and bottlenecks; the strategies to reduce and eliminate waste in the oil and gas operations; the root cause analysis techniques in oil and gas covering fishbone diagram, 5 Whys and Pareto analysis; the statistical process control (SPC) in monitoring production processes; the benefits of simulating oil and gas processes; and the digital twins and their role in continuous improvement.

During this interactive course, participants will learn the optimization techniques for production, linear programming and dynamic optimization; using Lean tools in the oil and gas sector and value stream mapping, Kanban and Just-in-time; the Six Sigma methodology and change management in process excellence initiatives; the digital transformation, automation and AI and predictive analytics and data-driven decision-making; building a culture of excellence and the leadership's role in sustaining improvements; linking process excellence and sustainability goals; the and green processes, carbon capture and other innovations.

Course Objectives

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

- Apply and gain a good working knowledge on process excellence in energy
- Discuss the key concepts of process excellence covering Lean, Six Sigma and total quality management (TQM)
- Illustrate process flow diagrams and mapping and identify bottlenecks and inefficiencies
- Apply strategies to reduce and eliminate waste in the oil and gas operations as well as performance metrics and KPIs
- Carryout root cause analysis techniques in oil and gas comprising of fishbone diagram, 5 Whys and Pareto analysis
- Apply statistical process control (SPC) in monitoring production processes
- Discuss the benefits of simulating oil and gas processes including the digital twins and their role in continuous improvement
- Apply optimization techniques for production covering linear programming and dynamic optimization
- Use Lean tools in the oil and gas sector comprising of value stream mapping, Kanban and Just-in-time
- Carryout Six Sigma methodology and change management in process excellence initiatives
- Identify digital transformation, automation and AI and apply predictive analytics and data-driven decision-making
- Build a culture of excellence and recognize the leadership's role in sustaining improvements
- Link process excellence and sustainability goals and identify green processes, carbon capture and other innovations

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 excellence in energy for all process improvement professionals, energy industry executives, operations managers, engineers and technicians, supply chain and logistics professionals, energy analysts, consultants and advisers.

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: -

- 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.

- 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 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. Attalla Ersan, PEng, MSc, BSc, is a **Senior Management Consultant** with over **35 years** of extensive experience within the **Oil & Gas**, **Hydrocarbon** and **Petrochemical** industries. His expertise widely covers the areas of **Economic Evaluation** Process, **Economic Models & their Application**, **Risk Management**, **Risk Mitigation & Contingency** Planning, **Decision Analysis** Techniques, **Capital Budgeting**, **Portfolio Management**, Advanced Root Cause Analysis (**RCA**), **Adaptability** & **Flexibility**, **Learning** & **Self Development**, **Document** Management, **Writing**, **Record** Management, **Quality** Management, **Value** Engineering, **Production & Inventory** Management, **Warehousing**, **Purchasing & Marketing** Management, Work Engineering & Advanced Production Techniques, **Quality** Assurance & Control, **Operations** Management, **Manpower** Planning, **Job** Design & Evaluation, **Recruitment**, Training & Development, **Performance Evaluation**, **Leadership** Skills, **Leadership & Team Building**, Psychology of **Leadership**, **Interpersonal Skills & Teamwork**, **Coaching & Mentoring**, **Creative Thinking & Problem-Solving** Techniques, **Emotional Intelligence**, **Presentation** Skills, **Communication & Interpersonal** Skills, Effective **Communication & Influencing** Skills, **Crisis** Management, **Business Ethics & Etiquette**, **Emotional Intelligence**, **Work Ethics**, **Positivity at Work**, **Negotiation** Skills, **Negotiation** Management, **Interpersonal** Skills, **Communication** Skills, **Adaptability** & **Flexibility**, **Coaching** Skills, **Mentoring** Techniques, **Communication & Listening** Techniques, **Office** Administration, **Office** Management, Strategic **Planning & Management**, **Human Resource** Management, **Leadership & Business** Management, **Industrial Relations** Management, Creative **Problem-Solving** Skills, Technical **Report Writing**, **Supervisory** Leadership, Effective **Communication** Skills, Total Quality Management (**TQM**), **Financial Reporting**, **Financial** Management, **Finance Auditing**, **Petroleum Finance & Accounting** Principles, **Life Cycle Costing Management**, **Finance** for **Non-Finance** Professional, **Budgeting & Cost Control**, **Budget Estimation** Types, **Forecasting & Cost**, **Cost** Reduction, Conceptual **Cost Estimating**, Planning & Managing **Contracts & Tenders**, **Contract** Management, **Bidding & Tendering**, **Procurement & Purchasing** Management, **Logistics** Operations, **Supply Chain** Management, Production Logistics, **Supply Chain** Management, **Fleet** Management, Stores & Stock Control, **Project** Management, **Project & Construction** Management, Managing **Project Risk**, QA/QC in **Project Execution & Construction** Management, Best Practices for Managing **Multiple Projects**, **Contract** Management, **Construction** Supervision & Management, **Work Ethic**, **Job** Analysis Evaluation and **Training & Development Needs**. He is currently the **CEO** of **Ersan Petrokimya Teknoloji Company Limited** wherein he is responsible for the design and operation of Biogas Process Plants.

During his career life, Mr. Attalla has gained his practical and field experience through his various significant positions and dedication as the **Policy**, **Organization & Manpower Development Head**, **Training & Development**, **Head**, **Ethylene Plant – Pyrolysis Furnace Engineer**, **Production Engineer**, Process Training Coordinator, Ethylene Plant Shift Supervisor, Ethylene Plant Panel & Fit Operator, Process Training & Development Coordinator, **Technical Consultant**, and **Instructor/Trainer** for Qatar Vinyl Company Limited and Qatar Petroleum Company (QAPCO).

Mr. Attalla is a **Registered Professional Engineer** and has a **Master** degree of **Education** in **Educational Training & Leadership** and a **Bachelor** degree of **Petrochemical Engineering**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, workshops, conferences and seminars internationally.

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.

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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Course Introduction & Objectives*** *Overview of Process Excellence • Why It Matters in the Oil & Gas Sector*
0930 – 0945	*Break*
0945 – 1100	***History & Evolution of Process Excellence*** *Origins & Major Milestones • Evolution in the Oil & Gas Context*
1100 – 1230	***Key Concepts of Process Excellence*** *Lean, Six Sigma & Total Quality Management (TQM)*
1230 – 1245	*Break*
1245 – 1420	***Key Concepts of Process Excellence (cont'd)*** *The Role of Continuous Improvement*
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 – 0930	***Process Mapping & Analysis*** *Process Flow Diagrams & Mapping • Identifying Bottlenecks & Inefficiencies*
0930 – 0945	*Break*

0945 – 1100	***Waste Elimination in Oil & Gas Operations*** *The 8 Wastes (DOWNTIME: Defects, Overproduction, Waiting, Non-Utilized Talent, Transportation, Inventory, Motion, Excess Processing) • Strategies to Reduce & Eliminate Waste*
1100 - 1230	***Performance Metrics & KPIs*** *Defining & Measuring Success • Critical Metrics in the Oil & Gas Sector*
1230 - 1245	*Break*
1245 - 1420	***Root Cause Analysis in Oil & Gas*** *Techniques: Fishbone Diagram, 5 Whys, Pareto Analysis • Case Studies & Practical Exercises*
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	***Statistical Process Control (SPC)*** *Understanding Variation & Control Charts • Application in Monitoring Production Processes*
0930 – 0945	*Break*
0945 – 1100	***Process Simulation & Digital Twins*** *Benefits of Simulating Oil & Gas Processes • Introduction to Digital Twins & their Role in Continuous Improvement*
1100 - 1230	***Optimization Techniques for Production*** *Linear Programming, Dynamic Optimization • Case Studies in Reservoir Management & Refining*
1230 - 1245	*Break*
1245 - 1420	***Lean Tools in the Oil & Gas Sector*** *Value Stream Mapping, Kanban, Just-in-Time • Achieving Flow & Pull in Production Processes*
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 4

0730 – 0930	***Six Sigma Methodology in Oil & Gas*** *DMAIC (Define, Measure, Analyze, Improve, Control) Framework*
0930 – 0945	*Break*
0945 – 1100	***Six Sigma Methodology in Oil & Gas (cont'd)*** *Black Belt & Green Belt Projects Examples*
1100 - 1230	***Change Management in Process Excellence Initiatives*** *The Human Factor: Engaging Teams & Managing Resistance • Strategies for Successful Organizational Change*
1230 - 1245	*Break*

1245 - 1420	***Case Studies: Successful Process Excellence in Oil & Gas*** *Real-World Examples of Successful Implementations • Lessons Learned & Key Takeaways*
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 5

0730 – 0930	***Role of Technology in Process Excellence*** *Digital Transformation, Automation & AI*
0930 – 0945	*Break*
0945 – 1100	***Role of Technology in Process Excellence (cont'd)*** *Predictive Analytics & Data-Driven Decision-Making*
1100 - 1230	***Cultural Transformation Towards Continuous Improvement*** *Building a Culture of Excellence • Leadership's Role in Sustaining Improvements*
1230 - 1245	*Break*
1245 – 1345	***Future Trends: Sustainability And Process Excellence*** *Linking Process Excellence with Sustainability Goals • Green Processes, Carbon Capture & Other Innovations*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
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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