COURSE OVERVIEW GE0012
Water Operations

Course Title
Water Operations

Course Date/Venue
August 25-29, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
GE0012

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.

Operation optimization of water and electric systems refers to the process of improving the efficiency, effectiveness and reliability of these systems through the use of technology, data analysis, and best practices. This includes optimizing resource utilization, reducing waste, improving energy efficiency, enhancing infrastructure, and increasing the overall performance of the systems. The aim of this course is to ensure that these critical services are delivered in an efficient, sustainable and cost-effective manner.

This course is designed to provide participants with a detailed and up-to-date overview on the operation optimization of water and electric systems. It covers the water and electric systems and network and its components; the benefit of optimized operation; the data analysis of network, data collection, data interpretation and data insights; the quality control, risk analysis and quality control methods; the risk analysis tools and utilizing data to identify risky areas; the cost reduction strategies and implementation, cost estimation and automation strategies; the implementation of process and tools; and troubleshooting strategies and advanced optimization strategies.

Course Objectives

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

- Apply and gain an in-depth knowledge on the operation optimization of water and electric systems
- Discuss water and electric systems and network as well as its components and the benefit of optimized operation
- Carryout data analysis of network, data collection, data interpretation and data insights
- Apply quality control, risk analysis and quality control methods
- Identify risk analysis tools and utilize data to identify risky areas
- Employ cost reduction strategies and implementation, cost estimation and automation strategies
- Implement process and tools and apply troubleshooting strategies and advanced optimization strategies

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 operation optimization of water and electric systems for water and electric utility managers, operations and maintenance engineers, energy and water resource managers, energy efficiency experts, electrical and mechanical engineers and energy and water supply chain managers.

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 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.

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. Kyle Chase Bester is a **Process Engineer & Senior HSE Consultant** with extensive years of practical experience within the **Oil & Gas**, **Power & Water Utilities** and other **Energy** sectors. His expertise includes Process Safety Management (**PSM**), Process Hazard Analysis (**PHA**), **Safety** in Industrial Plants, Design **Safety Process**, **ISD** Integration, **ISD** in Engineering Design, Management Systems for **ISD**, **Inherently Safer Design**, Fundamentals of **Safer Design**, **Inherently Safer** Approaches, **Proactive Safety** Engineering, Hazardous Materials Safety Design, **Process Control** Troubleshooting, **Process Control Efficiency**, **Process Control** System & Problem Solving, **Troubleshooting Gas Processing**, **Ammonia Manufacturing & Process Troubleshooting**, **Ammonia Storage & Loading** Systems, **Ammonia Plant** Operation, **Process Design** & **Engineering Including Piping Control Loops** & **Heat Exchangers**, Troubleshooting & Optimization, **Gas Removal**, **Amine Regeneration**, **Amine & Gas** Dehydration, **Molecular Sieves**, **NGL Recovery**, **LPG Distillation**, **Gas Processing**, **Furnaces**, **Waste Heat Recovery**, **Process** Troubleshooting, **Gas** Compression & Expansion, **Process Liquid**, **Process Handling** & **Measuring Equipment**, **Gas Dehydration**, **Gas Separation**, **Distillation Processes**, **Rigging** Safety Rules, Machinery & Hydraulic **Lifting Equipment**, Handling **Hazardous Chemicals**, Spill Containment, **Fire** Protection, **Fire** Precautions, **Incidents** & **Accidents** Reporting, **HSEQ** Audits & Inspection, **HAZOP** & **HAZID**, **HAZMAT** & **HAZCOM** Storage & Disposal, As Low as Reasonably Practicable (**ALARP**), **Hazardous Materials** & **Chemicals** Handling, **Pollution Control**, **Environment, Health** & **Safety** Management, **Process Risk** Analysis, Effective Tool Box Talks, Construction Sites Safety, **HSSE Management** System, **HSSE Audit** & **Inspection**, **HSEQ Procedures**, **Authorized Gas** Testing, **Confined Space Entry** & **Rescue**, **Risk** Management, **Quantitative** & **Qualitative Risk** Assessment, **Working at Height**, **Firefighting** Techniques, **Fire** & **Gas** Detection System, **Fire Fighter** & **Fire** Rescue, **Fire Risk** Assessment, **HSE Industrial Practices**, **Manual Handling**, **Rigging Safety Rules**, **Machinery** & **Hydraulic Lifting Equipment**, **Warehouse Incidents** & **Accidents Reporting**, **Incident** & **Accident Investigation**, **Emergency Planning**, **Emergency Response** & **Crisis** Management Operations, **Waste Management** Monitoring, **Root Cause Analysis**, Hazard & Risk Assessment, Task Risk Assessment (**TRA**), **Incident Command**, Job Safety Analysis (**JSA**), Behavioral Based Safety (**BBS**), **Fall Protection** and **Work Permit** & **First Aid**. He is currently the **Part Owner** & **Manager** of Extreme Water SA wherein he manages, re-designed and commissioned a water and wastewater treatment plants.

During his career life, Mr. Bester has gained his practical and field experience through his various significant positions and dedication as the **Project Manager**, **Asset Manager**, **Manager**, **Water Engineer**, **HSE Advisor**, **Safety Engineer**, **Process Engineer**, **Supervisor**, **Team Leader**, **Analyst**, **Process Technician**, **Landscape Designer** and **Senior Instructor/Trainer** for various international companies, infrastructures, water and wastewater treatment plants from New Zealand, UK, Samoa, Zimbabwe and South Africa, just to name a few.

Mr. Bester holds a **Diploma** in **Wastewater Treatment** and a **National Certificate** in **Wastewater & Water Treatment**. Further, he is a **Certified Instructor/Trainer**, an **Approved Chemical Handler** and has delivered numerous courses, trainings, conferences, seminars and workshops 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: Monday, 25th of August 2025

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Water & Electric Systems & Network***
0930 – 0945	*Break*
0945 – 1100	***Components of Water & Electric Systems & Networks***
1100 - 1230	***Benefit of Optimized Operation***
1230 – 1245	*Break*
1245 – 1420	***Data Analysis of Network***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2: Tuesday, 26th of August 2025

0730 – 0930	***Data Collection***
0930 – 0945	*Break*
0945 – 1045	***Data Interpretation***
1045 – 1130	***Data Insights***
1130 - 1230	***Quality Control & Risk Analysis***
1230 – 1245	*Break*
1245 – 1420	***Quality Control Methods***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3: Wednesday, 27th of August 2025

0730 – 0930	***Risk Analysis Tools***
0930 – 0945	*Break*
0945 – 1100	***Utilizing Data to Identify Risky Areas***
1100 – 1230	***Cost Reduction Strategies & Implementation***
1230 – 1245	*Break*
1245 – 1420	***Cost Estimation & Reduction Strategies***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4: Thursday, 28th of August 2025

0730 – 0930	***Automation Strategies***
0930 – 0945	*Break*
0945 – 1100	***Automation Strategies (cont'd)***
1100 – 1230	***Implementation Process & Tools***
1230 – 1245	*Break*
1245 – 1420	***Implementation Process & Tools (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5: Friday, 29th of August 2025

0730 – 0930	***Troubleshooting Strategies***
0930 – 0945	*Break*
0945 – 1100	***Troubleshooting Strategies (cont'd)***
1100 – 1230	***Advanced Optimization Strategies***
1230 – 1245	*Break*
1245 – 1345	***Advanced Optimization Strategies (cont'd)***
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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