

COURSE OVERVIEW HE0015(QP1)

Storage, Handling & Safe Use of Chemicals & Hazardous Materials

Course Title

Storage, Handling & Safe Use of Chemicals & Hazardous Materials

Course Date/Venue

December 22-26, 2024/Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA

Course Reference

HE0015(QP1)



Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



Procedures for dealing with hazardous chemicals are designed to effectively prevent environmental contamination and human health hazards through the use of good housekeeping and training. For an effective chemical handling, managers and supervisors must take an active role in procedure development and must be convinced of the importance of controlling hazards associated with chemical handling and storing and must be held accountable for employee chemical safety training.



This course is designed to provide delegates with a detailed and up-to-date overview of storage, handling and safe use of chemicals and hazardous materials. It covers chemical hazards; the classification of hazardous chemicals; the hazards of harmful chemicals; the specialized storage requirements of hazardous chemicals and bulk chemical storage facilities.

Further, the course will also discuss the precautions during the handling of chemicals; relevant legislations; the importance of labeling; warning notices and security; the characteristic of a wide range of hazardous chemicals; the risk of the potential hazardous chemicals being released; and the effect of the exposure to hazardous chemicals to health.

During this interactive course, participants will be able to employ health care procedures; identify the sources of ignition including static electricity; fire and explosion precautions and firefighting methods; maintain good housekeeping, documentation and auditing procedures; illustrate basic design and layout for good storage and handling procedures; transferring and handling procedures; accidents and spillage as well as site safety assessment; loss prevention procedures; method of incident reporting and recording; and planning for and handling emergencies.

Course Objectives

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

- Apply and gain an in-depth knowledge on storage, handling and safe use of chemicals and hazardous materials
- Discuss potential hazards and review the classification of hazardous substances
- Recognize the hazards of harmful substances and emphasize the specialized storage requirements of hazardous materials
- Identify bulk chemical storage facilities and determine the precautions during the handling of chemicals
- Enumerate relevant legislations regarding chemical handling and hazardous material
- Recognize the importance of labeling, warning notices and security in hazardous materials
- Determine the characteristic of a wide range of hazardous substances
- Minimize the risk of the potential hazardous chemicals being released and the effect of the exposure to hazardous substances to health
- Employ health care procedures
- Identify the sources of ignition including static electricity, fire and explosion precautions and fire fighting methods
- Maintain good housekeeping and improve documentation and auditing procedures
- Illustrate basic design and layout for good storage and handling procedures
- Perform safe operations involving bulk storage, transfer and handling
- Manage the incidents involving the release of hazardous substances including accidents and spillage
- Prepare and use the relevant procedures when dealing with chemical spillages
- Review and perform site safety assessment and identify the requirement for the assessment of potential hazards and risks in process industries
- Employ loss prevention procedures
- Prepare the reports for submission to the relevant authorities
- Prepare and use the safe disposal procedures for unwanted substances
- Carryout process of planning and handling emergencies

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, course conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of storage, handling and safe use of chemicals and hazardous materials for senior inventory officers, inventory officers, inventory assistants, technical staffs, senior technicians, stores officers, stores operators, helpers, engineers and senior staff who facilitate handling storage, and transfer of chemicals.

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\$ 7,000 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

Certificates are accredited by the following international accreditation organizations: -


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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.

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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.

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. Andrew Ladwig is a **Senior Process & Mechanical Engineer** with over **25 years** of extensive experience within the **Oil & Gas, Refinery, Petrochemical & Power** industries. His expertise widely covers in the areas of **Ammonia Manufacturing & Process Troubleshooting, Distillation Towers, Crude Oil Distillation, Fundamentals of Distillation** for Engineers, **Distillation** Operation and Troubleshooting, **Advanced Distillation** Troubleshooting, **Distillation** Technology, **Vacuum Distillation, Ammonia Storage & Loading Systems, Ammonia Plant** Operation, Troubleshooting & Optimization, **Ammonia Recovery, Ammonia Plant Safety, Hazard of Ammonia Handling, Storage & Shipping, Operational Excellence in Ammonia Plants, Fertilizer Storage** Management (Ammonia & Urea), **Fertilizer Manufacturing** Process Technology, **Sulphur Recovery, Phenol Recovery & Extraction, Wax Sweating & Blending, Petrochemical & Fertilizer Plants, Nitrogen Fertilizer Production, Petroleum Industry Process Engineering, Refining Process & Petroleum Products, Refinery Planning & Economics, Safe Refinery Operations, Hydrotreating & Hydro-processing, Separators in Oil & Gas Industry, Gas Testing & Energy Isolations, Gas Liquor Separation, Industrial Liquid Mixing, Wax Bleachers, Extractors, Fractionation, Operation & Control of Distillation, Process of Crude ATM & Vacuum Distillation Unit, Water Purification, Water Transport & Distribution, Steam & Electricity, Flame Arrestors, Coal Processing, Environmental Emission Control, R&D of Wax Blending, Wax Molding/Slabbing, Industrial Drying, Principles, Selection & Design, Certified Process Plant Operations, Control & Troubleshooting, Operator Responsibilities, Storage Tanks Operations & Measurements, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Performance, Efficiency & Optimization, Continuous Improvement & Benchmarking, Process Troubleshooting Techniques, Oil & Gas Operation/Introduction to Surface Facilities, Pressure Vessel Operation, Process Equipment Performance & Troubleshooting, Plant Startup & Shutdown, Startup & Shutdown the Plant While Handling Abnormal Conditions, Flare & Relief System, Process Gas Plant Start-up, Commissioning & Problem Solving, Process Liquid and Process Handling & Measuring Equipment. Further, he is also well-versed in **Compressors & Turbines** Operation, Maintenance & Troubleshooting, **Heat Exchanger** Overhaul & Testing Techniques, Balancing of **Rotating Machinery (BRM)**, **Pipe Stress Analysis, Valves & Actuators** Technology, Inspect & Maintain **Safeguarding Vent & Relief System**, Certified Inspectors for **Vehicle & Equipment**, Optimizing **Equipment Maintenance & Replacement Decisions, Certified Maintenance Planner (CMP), Certified Planning and Scheduling Professional (AACE-PSP), Tank Design, Construction, Inspection & Maintenance, Material Cataloguing, Specifications, Handling & Storage, Steam Trap Design, Operation, Maintenance & Troubleshooting, Steam Trapping & Control, Column, Pump & Exchangers, Troubleshooting & Design, Rotating Equipment Operation & Troubleshooting, Control & ESD System, Detailed Engineering Drawings, Codes & Standards, Budget Preparation, Allocation & Cost Control, Root Cause Analysis (RCA), Production Optimization, Permit to Work (PTW), Project Engineering, Data Analysis, Process Hazard Analysis (PHA), HAZOP Study, Sampling & Analysis, Training Analysis, Job Analysis Techniques, Storage & Handling of Toxic Chemicals & Hazardous Materials, Hazardous Material Classification & Storage/Disposal, Dangerous Goods, Environmental Management System (EMS), Supply Chain, Purchasing, Procurement, Logistics Management & Transport & Warehousing & Inventory, Risk Monitoring Authorized Gas Tester (AGT), Confined Space Entry (CSE), Personal Protective Equipment (PPE), Fire & Gas, First Aid and Occupational Health & Safety.****

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Mechanical Engineer, Project Engineer, Reliability & Maintenance Engineer, Maintenance Support Engineer, Process Engineer, HSE Supervisor, Warehouse Manager, Quality Manager, Business Analyst, Senior Process Controller, Process Controller, Safety Officer, Mechanical Technician, Senior Lecturer and Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig has a **Bachelor's** degree in **Chemical Engineering** and a **Diploma in Mechanical Engineering**. Further, he is a **Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and has delivered various trainings, workshops, seminars, courses and conferences 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: Sunday, 22nd of December 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0900	Introduction to Potential Hazards
0900 – 0915	Break
0915 – 1030	Classification of Hazardous Substances
1030 – 1200	The Hazards of Harmful Substances
1200 – 1215	Break
1215 – 1330	Specialized Storage Requirements
1330 – 1420	Bulk Chemical Storage Facilities
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2: Monday, 23rd of December 2024

0730 – 0900	Precautions During the Handling of Chemicals
0900 – 0915	Break
0915 – 1000	Legal Requirements
1000 – 1100	Labeling, Warning Notices & Security
1100 – 1200	Exposure to Substances Hazardous to Health
1200 – 1215	Break
1215 – 1420	Work Related Illnesses & Potential Consequences of Accidents
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Tuesday, 24th of December 2024

0730 – 0900	Health Care Procedures
0900 – 0915	Break
0915 – 1030	Sources of Ignition Including Static Electricity
1030 – 1200	Fire & Explosion Precautions & Fire Fighting Methods
1200 – 1215	Break
1215 – 1420	Chemical Storage Requirements
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 25th of December 2024

0730 – 0900	Good House Keeping, Documentation & Auditing
0900 – 0915	Break
0915 – 1030	Transfer & Handling Procedures
1030 – 1200	Accidents & Spillage
1200 – 1215	Break
1215 – 1420	Site Safety Assessment
1420 – 1430	Recap
1430	Lunch & End of Day Four

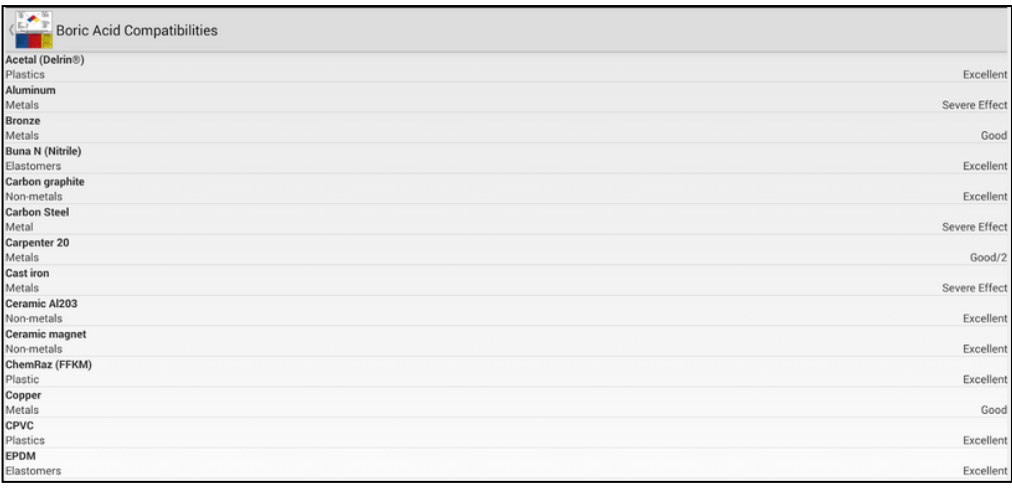


Day 5: Thursday, 26th of December 2024

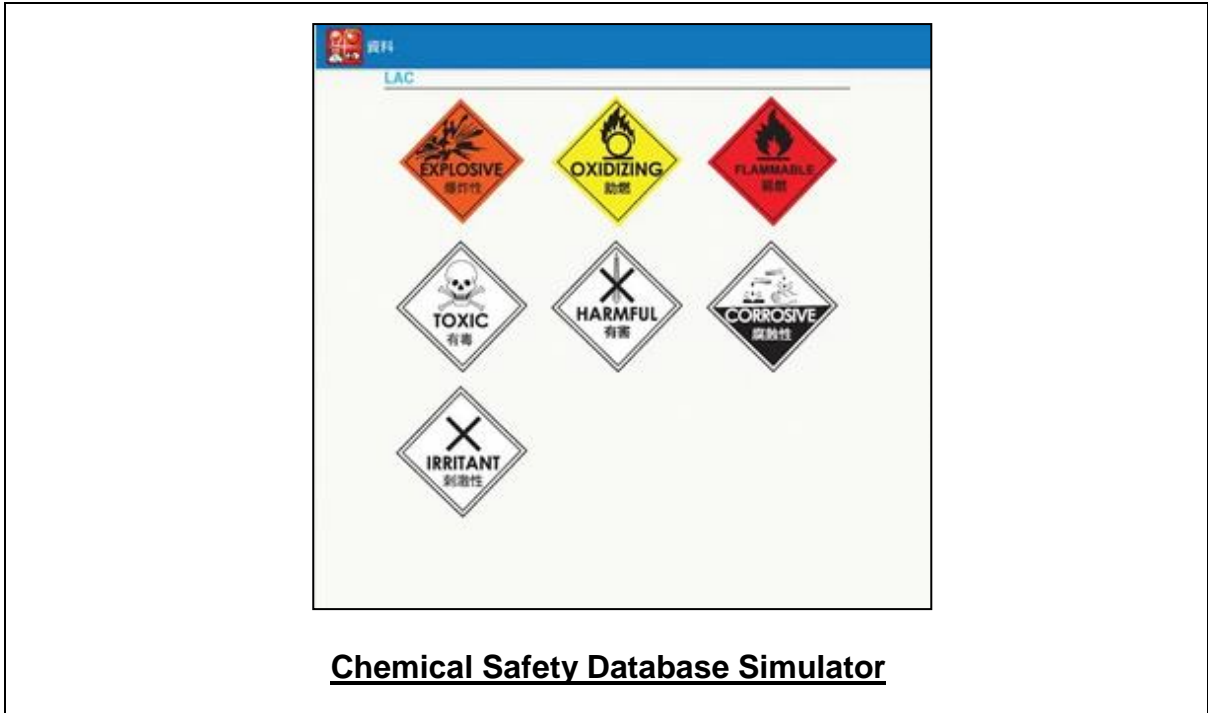
0730 – 0900	<i>Requirement for the Assessment of Potential Hazards & Risks in Process Industries</i>
0900 – 0915	<i>Break</i>
0915 – 1030	<i>Loss Prevention Procedures</i>
1030 – 1200	<i>Method of Incident Reporting & Recording</i>
1200 – 1215	<i>Break</i>
1215 – 1345	<i>Planning for & Handling Emergencies</i>
1345 – 1400	<i>Course Conclusion</i>
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Certificates</i>
1430	<i>Lunch & End of Course</i>

Simulators (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using one of our state-of-the-art simulators; “Chemical Compatibility 1.1 Simulator”, “Chemical Safety Database Simulator”, “CAMEO Chemicals Suite Simulator” or “ERG 2012 Simulator”.



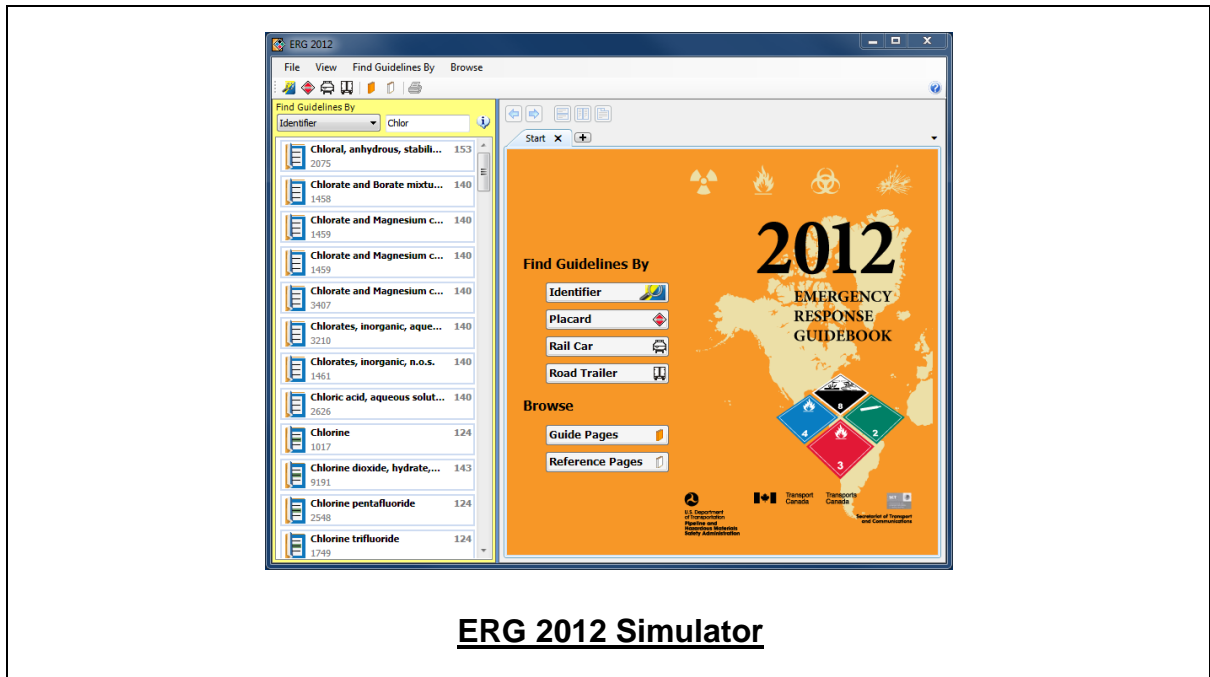
Chemical Compatibility 1.1 Simulator



Chemical Safety Database Simulator



CAMEO Chemicals Suite Simulator



ERG 2012 Simulator

Course Coordinator

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