



## COURSE OVERVIEW HE0611 Hazard Communication (HAZWOPER) (E-Learning Module)

### Course Title

Hazard Communication (HAZWOPER)  
(E-Learning Module)

### Course Reference

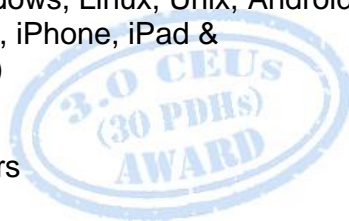
HE0611

### Course Format & Compatibility

SCORM 1.2. Compatible with IE11, MS-Edge, Google Chrome, Windows, Linux, Unix, Android, IOS, iPadOS, macOS, iPhone, iPad & HarmonyOS (Huawei)

### Course Duration

30 online contact hours  
(3.0 CEUs/30 PDHs)



### Course Description



This E-learning course is designed to provide participants with a detailed and up-to-date overview of hazard communication (HAZWOPER). It covers the hazardous waste management, pollution prevention and the general duties under the hazard communication standard summary; the GHS pictograms, their uses and the common features observed in the high-cost accidents; the hazard identification, control and hierarchical holographic modeling (risk filtering); the risk significance, matrix, risk management process flow chart and chemical hazard assessment and control; the hierarchy of control and hazard and operability (HAZOP) analysis; the analysis methodology and chemical classifications; and the labels and other forms of warning, precautionary statements and secondary container labels.

During this course, participants will learn the safety data sheets and safety methods process facilities safety hardware; the hierarchy of measures to protect people, planet and property; the HAZMAT awareness, NFPA 704 labeling system and GHS (globally harmonized system) symbols; the hazard diamonds for the carriage of dangerous goods and HAZCHEM sign guide for transportation; the section 704 hazard identification system of the National Fire Protection Association; the various types of hazards comprising of health, flammability, instability and special hazards; the hazardous waste, waste categories and the largest source of unregulated hazardous wastes; the characteristics of hazardous wastes and hazardous waste priorities; the DOT and HAZCHEM identification systems; and the hazardous material code.





## **Course Objectives**

After completing the course, the employee will:-

- Apply and gain an in-depth knowledge on hazard communication (HAZWOPER)
- Employ hazardous waste management and pollution prevention and discuss the general duties under the hazard communication standard summary
- Illustrate GHS pictograms and discuss their uses including the common features observed in the high-cost accidents
- Carryout hazard identification and control as well as hierarchical holographic modeling (risk filtering)
- Explain risk significance and matrix and review risk management process flow chart and chemical hazard assessment and control
- Apply hierarchy of control and hazard and operability (HAZOP) analysis
- Discuss analysis methodology and chemical classifications covering health and physical hazards
- Identify labels and other forms of warning that include precautionary statements and secondary container labels
- Review safety data sheets and apply safety methods process facilities safety hardware
- Explain the hierarchy of measures to protect people, planet and property
- Employ HAZMAT awareness as well as apply NFPA 704 labeling system and GHS (globally harmonized system) symbols
- Describe hazard diamonds for the carriage of dangerous goods and HAZCHEM sign guide for transportation
- Discuss section 704 hazard identification system of the national fire protection association
- Recognize various types of hazards comprising of health, flammability, instability and special hazards
- Identify hazardous waste, waste categories and the largest source of unregulated hazardous wastes
- Describe the characteristics of hazardous wastes and hazardous waste priorities
- Apply DOT and HAZCHEM identification systems and hazardous material code

## **Who Should Attend**

This course provides an overview of all significant aspects and considerations of hazard communication (HAZWOPER) for operations, production, maintenance and HSE departments dealing with hazardous waste and materials management and pollution prevention. Governmental & regulatory authorities, water & sewage treatment departments, municipalities and universities and academic professors and researchers will also benefit from the course.






**Course Certificate(s)**

Internationally recognized certificates will be issued to all participants of the course.

**Certificate Accreditations**

Certificates are accredited by the following international accreditation organizations:-

- 
USA International Association for Continuing Education and Training (IACET)

Haward Technology is an Authorized Training Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, Virginia 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 1-2013 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 1-2013 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 Association 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 Fee**

As per proposal





## **Training Methodology**

This Trainee-centered course includes the following training methodologies:-

- Talking presentation Slides (ppt with audio)
- Simulation & Animation
- Exercises
- Videos
- Case Studies
- Gamification (learning through games)
- Quizzes, Pre-test & Post-test

Every section/module of the course ends up with a Quiz which must be passed by the trainee in order to move to the next section/module. A Post-test at the end of the course must be passed in order to get the online accredited certificate.

## **Course Contents**

- Hazardous Waste Management & Pollution Prevention
- Introduction
- Hazard Communication in the U.S. Strategy
- General Duties under the Hazard Communication Standard Summary
- GHS Pictograms and Their Uses
- Common Features Observed in the High-Cost Accidents
- Hazard Identification & Control
- HHM: Hierarchical Holographic Modeling (Risk Filtering)
- Risk Significance
- Risk Matrix
- Using the Risk Matrix
- Hazard Definition
- Risk Management Process Flow Chart
- Chemical Hazard Assessment & Control
- Control Measures
- Hierarchy of Control
- Control Measure Effectiveness
- Hazard and Operability (HAZOP) Analysis
- P&ID Drawings – Sample
- Polymer mixing plant at Marmul G station
- HAZOP Studies







- HAZOP Analysis Methodology
- HAZOP Worksheet Example
- Hazard Communication Training Program (Including GHS Revisions)
- Agenda
- Chemical Classifications
- Chemical Classifications: Health Hazards
- Chemical Classifications: Physical Hazards
- Labels
- Labels: Shipping
- DOT and MIOSHA Labels
- Labels: Pictograms
- Labels: Pictograms – Health Hazards
- Labels: Pictograms – Physical Hazards
- Labels: Signal Word
- Labels: Hazard Statement
- Labels and other forms of warning – Precautionary Statements
- Secondary Container Labels
- Labels: Secondary Containers
- Safety Data Sheets
- Safety Data Sheets (SDSs)
- Containment
- Flixborough Accident
- Safety Methods Process Facilities Safety Hardware
- Hierarchy of Measures to Protect People, Planet & Property
- Prevention
- Area Classification
- Area Classification / The Three Zone Concept
- Area Classification / The Extend Zone
- Safety Hardware
- Safety Hardware –Protection and Control
- Safety Hardware –Fire Deluge Control
- Safety Hardware –Passive Fire Protection Explosions Doors / Walls
- Evacuation / Escape / Rescue
- Work Permits
- Work Permits – The Process of the Risk Assessment





- Classification of Hazardous Materials
- HAZMAT Awareness
- What is a Hazardous Material?
- Labels and Warnings
- NFPA 704 Labeling System
- GHS (Globally Harmonized System) Symbols
- GHS Pictograms
- U.S. Dept. of Transportation (DOT) Hazard Materials Classes
- Hazard Diamonds for the Carriage of Dangerous Goods
- HAZCHEM Sign Guide for Transportation
- Exposure & Absorption
- NFPA 704 Hazard Identification Systems
- Introduction to Section 704 Hazard Identification System of the National Fire Protection Association
- Introduction
- Health Hazards
- Flammability Hazards
- Instability Hazards
- Special Hazards
- Hazardous Waste
- What is a Hazardous Waste?
- Waste Categories
- Largest Source of Unregulated Hazardous Wastes
- What can You Do at Home?
- New Threat: E-Waste
- Mercury (Hg)
- Mercury Poisoning
- Lead (Pb)
- Lead Poisoning
- Characteristics of Hazardous Wastes (meets 1 or more characteristics)
- Hazardous Waste Priorities
- Phytoremediation
- Trade-offs of Phytoremediation
- Trade-offs of Deep Underground Wells
- Trade-offs of Surface Impoundments





- Secure Hazardous Waste Landfill
- Transition to a Low-Waste Society
- Achieving a Low-Waste Society
- DOT and HAZCHEM Identification Systems
- Hazard Class: DOT System
- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable Liquids
- Storage and Transport of Compressed Gases
- Class 4: Flammable Solids
- Class 5: Oxidizers and Organic Peroxides
- Class 6: Poisonous and Infectious Materials
- Class 7: Radioactive Materials
- Class 8: Corrosive Materials
- Class 9: Miscellaneous Hazardous Materials
- HAZCHEM Identification System
- Hazardous Material Code
- Waste Minimization
- Waste Minimization Hierarchy
- Cleaner Technology - General Example Technology
- Multimedia Pollution
- Source Reduction
- Treatment
- Waste Minimization
- Product Specifications
- Pollution Prevention – Critical Step
- Environmental Design Constraints and Objectives Example
- Process Development Projects
- Pollution Prevention Strategies for Conceptual Design
- Chemical Protective Clothing
- Protective Clothing Applications
- Components - Chemical Protective Ensemble
- Level of Protection - Hazchem Suit
- Performance of the PPE
- Levels of Protection-European Standards





- Ensemble Selection Factors
- Classification of Protective Clothing
- Types of Protective Clothing for Full Body Protection
- Personal Protective Equipment
- Employer Responsibilities
- PPE Human Protection
- Respirators
- Respirators - Use Requirements
- Respirators Selection
- Respirators for IDLH Atmosphere (Immediately Dangerous to Life or Health)
- Respirators for Non-IDLH Atmosphere
- Selection of an Appropriate Respirator
- Use of Respirators
- Protective Clothing Selection Factors
- Chemical Protective Clothing Management Program
- Chemical Protective Clothing Program Review and Evaluation
- Course Recap
- Environmental Technologies
- What are Wastes?
- Basel Convention
- Wastes
- Some Facts
- Sources of Wastes
- Principal Sources of Solid Wastes
- Typical Composition of Municipal Solid Wastes
- Waste Management & Pollution Control Options
- Trends in Waste Generation, Recovery, & Disposal
- Municipal Waste
- Open Dump Waste Management
- Sanitary Landfill Waste Management
- Design of a Sanitary Landfill
- The Bathtub Effect
- Incineration Method
- Proportions of Municipal Waste Handled by Various Disposal Methods
- Ocean Dumping Method







- Reducing Waste
- Composting
- Recycling
- Recycling Consists of Three Steps
- Use of Standard Symbols Facilities
- Used PET Recycling Process
- Used Automobile Recycling Process
- Home Appliances Recycling Process
- Office Equipment Recycling Process
- Fluorescent Tubes Recycling Process
- Waste Exchange Method
- Liquid Waste
- A Secure Landfill Design for Toxic Waste Disposal
- Well Injection Method
- Gasification and Pyrolysis
- Gasification Method
- Why Gasification?
- Waste type suitable for gasification
- Krupp Uhde Gasifier Concept
- Fluidized Bed Gasification Today
- Sewage Treatment
- Basics of Septic Tank System
- Municipal Sewage Treatment
- Radioactive Waste Disposal
- High Level Waste Depository
- Requirements for a Radio-Active Waste Disposal System
- Plan for a Waste Isolation Pilot Plant
- Story of Yucca Mountain Site (USA)
- Proposed Waste Disposal Site – Nevada (USA)
- Major Faults Near the Yucca Mountain Site
- Yucca Mountain Site
- Story of Love Canal
- Impacts of Waste if Not Managed Wisely
- Impacts of Waste
- Sources of Human Exposures





- Points of Contact
- The Waste Management Hierarchy
- Canada's Beare Road Landfill: Making Good Use of Old Garbage
- Conclusion
- Question 1: Review
- Question 2: Review
- Question 3: Review
- Question 4: Review
- Question 5: Review
- Question 6: Review
- Question 7: Interpreting Graphs and Data
- Section 9 Hazardous Waste Operations & Emergency Response (HAZWOPER)
- Emergency Response: An Introduction
- What is the employer's responsibility for emergency planning?
- Exactly what is an "emergency"?
- What are the required elements of the ER plan?
- Emergency Response Plan Required Elements: Pre-emergency Planning
- Emergency Response Plan Required Elements: Roles, Lines of Authority, Communication
- Emergency Response Plan Required Elements: Emergency Recognition and Prevention
- Emergency Response Plan Required Elements: Emergency Alerting/Response Procedures
- Emergency Response Plan Required Elements: Notification.
- Emergency Response Plan Required Elements: Evaluation of Situation
- Emergency Response Plan Required Elements: Rescue/Response Action
- Emergency Response Plan Required Elements: PPE and Equipment
- Emergency Response Plan Required Elements: Safe Distances and Places of Refuge
- Emergency Response Plan Required Elements: Site Security and Control
- Emergency Response Plan Required Elements: Evacuation Routes and Procedures
- Emergency Response Plan Required Elements: Decontamination Procedures
- Emergency Response Plan Required Elements: First-aid/Emergency Medical Treatment
- Emergency Response Plan Required Elements: Reporting Requirements
- Emergency Response Plan Required Elements: Critique of Response





- HAZWOPER 8-Hour Training: Update Worker on Recent Developments
- Emergency response plan
- Emergency Response: Update
- Management of Fire Hazards
- Emergency Planning and Training
- Accidents
- What is an Accident?
- Overall Accidents are Caused by
- Sample Fishbone Diagram for Root Causes of Incident
- Investigating an Accident
- When Conducting a Accident Investigation
- Why Investigate Minor Accidents?
- Why Investigate Minor Accidents?
- Employee Responsibility
- How to Conduct an Accident Investigation
- The 8 Steps of an Incident Investigation
- Management Systems
- Certification, Registration and Accreditation
- ISO 9000 Definition
- Plan; Do; Check; Act
- ISO 9000 Series
- ISO 14000
- ISO 14000 – Scope
- ISO 14000
- ISO 14000 Standards
- General Description of ISO 14001
- ISO 14000 Series

