Kuwait Petroleum Corporation
مؤسسة البترول الكويتية

COURSE OVERVIEW HE1858-6M-IH
Hazard Identification, Risk Assessment, Risk Control & Process Hazard Analysis - Customized
(E-Learning Module)

Course Title
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Course Reference
HE1858-6M-IH

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
3.0 online contact hours
(3.0 CEUs/30 PDHs)

3.0 CEUs
(30 PDHs)
AWARD

Course Description

This E-Learning is designed to provide participants with a detailed and up-to-date overview of hazard identification, risk assessment risk control and process hazard analysis. It covers the physical hazards, chemical hazards, biological hazards, ergonomic hazards and psychosocial hazards; the importance of identifying hazards as it protects lives and well-being, prevent accidents, reduce injuries and illnesses; the legal and regulatory compliance for workplace safety; the workers compensation, legal fees and penalties; the replacement costs, productivity loss and reputation; the customer impact process of hazard identification; the hazard, risk, hazard identification and risk assessment; and the likelihood, consequence, risk matrix, residual risk and control measures.

During this interactive course, participants will learn the hierarchy of control, risk assessment and control measures; the safety management system, regular site inspections and training employees to recognize hazards; the job hazard analysis (JHA), quantitative risk assessment (QRA), failure modes and effects analysis (FMEA), bowtie analysis and hazard and operability study (HAZOP); the personal protective equipment (PPE), emergency response plans, incident investigation, regular audits and assessment; the feedback mechanisms, benchmarking, PHA methods, and techniques; the documentation and reporting risk ranking, continuous improvement and regulatory compliance; and the integration with safety management systems and what-if analysis.

Course Objectives

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

- Apply and gain a comprehensive knowledge on hazard identification, risk assessment, risk control and process hazard analysis

- Appreciate the need to identify workplace hazards and understand the terms related to hazard identification, risk assessment and control

- Identify the tools and techniques of hazard identification, risk assessment and control

- Recognize PHA, hazards, what-if and what-if/checklist studies, recognize hazard and operability (HAZOP) studies and differentiate type of PHA techniques

- Discuss physical hazards, chemical hazards, biological hazards, ergonomic hazards and psychosocial hazards

- Explain the importance of identifying hazards as it protects lives and well-being, prevent accidents and reduce injuries and illnesses

- Interpret the legal and regulatory compliance for workplace safety

- Assess workers compensation, legal fees and penalties, replacement costs, productivity loss and reputation and customer impact

- Illustrate the process of hazard identification covering its benefits, continuous improvement and safety culture

- Define hazard, risk, hazard identification, risk assessment, likelihood, consequence, risk matrix, residual risk and control measures

- Carryout hierarchy of control, review and monitoring, risk assessment and control measures

- Apply hazard identification, establish a safety management system, conduct regular site inspections and train employees to recognize hazards

- Employ job hazard analysis (JHA), quantitative risk assessment (QRA) failure modes and effects analysis (FMEA), bowtie analysis and hazard and operability study (HAZOP)

- Use personal protective equipment (PPE) and perform emergency response plans, incident investigation, regular audits and assessments

- Review feedback mechanisms, training and awareness as well as apply benchmarking, PHA methods and techniques and documentation and reporting

- Carryout risk ranking, continuous improvement, regulatory compliance, integration with safety management systems and what-if analysis

Who Should Attend

This course provides an overview of all significant aspects and considerations of hazard identification, risk assessment, risk control and process hazard analysis for safety managers, engineers, operators, management, health and safety committees, environmental specialists, emergency response teams and occupational health professionals.

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.

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

- Understanding the Importance of Identifying Workplace Hazards
- Video
- Understanding Workplace Hazards
  * Physical Hazards
  * Chemical Hazards
  * Biological Hazards
  * Ergonomic Hazards
  * Psychosocial Hazards
  * Recognizing and Mitigating Hazards
- Quiz
- Why Identifying Hazards is Important
  * Protecting Lives and Well-being
  * Preventing Accidents
  * Reducing Injuries and Illnesses
  * Legal Compliance and Reputation
  * Financial Benefits
  * Legal and Regulatory Compliance
  * Legal Framework for Workplace Safety
  * Importance of Identifying Hazards
  * Mitigating Hazards
  * Consequences of Non-Compliance
  * Employee Welfare

- Video
- Reducing Financial Costs
  * Medical Expenses
- Workers' Compensation
- Increased Insurance Premiums
- Legal Fees and Penalties
- Replacement Costs
- Productivity Loss
- Reputation and Customer Impact
  * Long-term Impact
- The Process of Hazard Identification
  * Proactice vs. Reactive Hazard Identification
  * Key Components of Proactive Hazard Identification
  * Benefits of a Proactive Approach
  * Continuous Improvement
  * Safety Culture
- Video
- Question 1
- Question 2
- Question 3
- Terminology
  * Hazard
  * Risk
  * Hazard identification
  * Risk assessment
  * Likelihood
  * Consequence
  * Risk Matrix
  * Residual Risk
  * Control measures
- Hierarchy of Control
- Review and Monitoring
- Summary of terms
- Risk Assessment
- Control Measures

- Question 1
- Question 2
- Question 3
- HIRAC
  * Hazard Identification
  * Establish a Safety Management System
  * Conduct Regular Site Inspections
  * Train Employees to Recognize Hazards
- Video
- Job Hazard Analysis (JHA)
- Break Down the Job
- Video
- The last 3 Area's of Hazard Identification Tools
- Risk Assessment
- Video
- Quantitative Risk Assessment (QRA)
- Video
- Failure Modes and Effects Analysis (FMEA)
- Bowtie Analysis
- Hazard and Operability Study (HAZOP)
- Question 1
- Question 1
- Question 3
- Hierarchy of Controls
- Engineering Controls
- Video
- Administrative Controls
- Personal Protective Equipment (PPE)
- Emergency Response Plans
- Incident Investigation
- Regular Audits and Assessments
- Feedback Mechanisms
- Training and Awareness
- Benchmarking
- Question 1

- Question 2
- Question 3
- PHA
  - * Purpose of PHA
  - * Methods and Techniques
  - * Video
  - * PHA Team
  - * Documentation and Reporting
  - * Risk Ranking
  - * Continuous Improvement
  - * Regulatory Compliance
  - * Integration with Safety Management Systems
  - * What If
  - * What-if Analysis
  - * Application
  - * Process
  - * Tools
  - * What-If/Checklist Study
- Question 1
- Question 2
- Question 3
- HAZOP
  - * Purpose
  - * Methodology
  - * Procedure
  - * Documentation
  - * Follow-up and Implementation
  - * Ongoing Process
  - * Benefits
  - * (HAZOP) Studies