



PB INSTITUTE OF RESEARCH AND TECHNOLOGY

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Nairobi - Kenya

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Chemical Safety And Hazardous Materials Management Training

Duration: 10 days

On-Site

01 Who Should Attend

- This course is ideal for;
- Chemical handlers
- Laboratory technicians
- Safety officers
- Environmental health specialists
- Facility managers
- Emergency responders
- Compliance officers
- Risk managers
- Waste management personnel
- Industrial workers
- Students of chemistry and environmental science
- Individuals interested in chemical safety
- Operations managers
- Procurement officers
- Transportation personnel



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02 About the Course

Chemical Safety and Hazardous Materials Management training equips professionals with the methodologies to safely handle, store, and dispose of hazardous chemicals. This course focuses on analyzing chemical hazards, implementing risk assessment techniques, and understanding the impact of control measures on worker safety and environmental protection. Participants will learn to utilize chemical safety data sheets (SDS), develop emergency response plans, and understand the intricacies of regulatory compliance and waste management. By mastering chemical safety, professionals can enhance workplace safety, minimize chemical incidents, and contribute to the creation of a secure and compliant environment.

The increasing use of chemicals in diverse industries necessitates a comprehensive understanding of chemical safety and hazardous materials management. This course delves into the nuances of chemical toxicity, exposure pathways, and control effectiveness evaluation, empowering participants to develop and implement tailored risk management strategies. By integrating chemical knowledge with safety protocols, this program enables individuals to lead chemical safety initiatives and contribute to the creation of a safe and compliant organizational framework.



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03 Workshop Objectives

- Understand the principles and importance of chemical safety and hazardous materials management.
- Implement techniques for identifying and classifying hazardous chemicals.
- Understand the role of chemical safety data sheets (SDS) in hazard communication.
- Implement techniques for conducting chemical risk assessments and exposure monitoring.
- Understand the principles of chemical toxicity and exposure limits.
- Implement techniques for evaluating and prioritizing chemical risks.
- Understand the role of chemical control measures in mitigating chemical hazards.
- Implement techniques for developing and implementing effective chemical safety plans.
- Understand the legal and regulatory requirements related to chemical safety.
- Implement techniques for conducting chemical spill response and emergency procedures.
- Understand the challenges and opportunities of managing chemicals in diverse workplaces.
- Understand the role of employee training and participation in chemical safety.
- Develop strategies for continuous improvement in chemical safety practices.

04 Module Topics

Module 1: Foundations of Chemical Safety

- Principles and importance of chemical safety and hazardous materials management.
- Understanding the relationship between chemical hazards, exposures, and health effects.
- Benefits of proactive chemical safety practices.
- Historical context and evolution of chemical safety.

Module 2: Chemical Hazard Identification and Classification



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- Techniques for identifying and classifying hazardous chemicals.
- Implementing hazard identification methods (literature reviews, process reviews, chemical inventories).
- Utilizing hazard checklists and observation techniques.
- Managing hazard identification.

Module 3: ??? Module 3: Chemical Safety Data Sheets (SDS)

- Role of chemical safety data sheets (SDS) in hazard communication.
- Understanding SDS sections and information.
- Implementing SDS management and accessibility.
- Managing SDS.

Module 4: Chemical Risk Assessment and Exposure Monitoring

- Techniques for conducting chemical risk assessments and exposure monitoring.
- Implementing exposure monitoring strategies (air sampling, surface sampling).
- Utilizing risk assessment tools and software.
- Managing risk assessment.

Module 5: Chemical Toxicity and Exposure Limits

- Principles of chemical toxicity and exposure limits.
- Understanding acute and chronic health effects.
- Utilizing exposure limits and occupational exposure standards.
- Managing toxicity data.

Module 6: Risk Evaluation and Prioritization of Chemicals

- Techniques for evaluating and prioritizing chemical risks.
- Implementing risk ranking and severity assessment.
- Utilizing risk matrices and decision-making tools.
- Managing risk prioritization.

Module 7: Chemical Control Measures



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- Role of chemical control measures in mitigating chemical hazards.
- Understanding the hierarchy of controls (elimination, substitution, engineering, administrative, PPE).
- Implementing control selection and implementation strategies.
- Managing chemical controls.

Module 8: Chemical Safety Plan Development

- Techniques for developing and implementing effective chemical safety plans.
- Implementing control implementation and monitoring procedures.
- Utilizing chemical safety action plans and documentation.
- Managing chemical safety plans.

Module 9: Legal and Regulatory Requirements for Chemicals

- Legal and regulatory requirements related to chemical safety.
- Implementing compliance with chemical safety regulations and standards.
- Utilizing legal registers and compliance tools.
- Managing legal compliance.

Module 10: Chemical Spill Response and Emergency Procedures

- Techniques for conducting chemical spill response and emergency procedures.
- Implementing spill containment, cleanup, and reporting procedures.
- Utilizing emergency response equipment and protocols.
- Managing emergency response.

Module 11: Chemical Management in Diverse Workplaces

- Challenges and opportunities of managing chemicals in diverse workplaces.
- Implementing chemical safety strategies in different laboratory, industrial, and storage settings.
- Utilizing chemical safety techniques in multinational and global operations.
- Managing chemical safety in diverse contexts.



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Module 12: Employee Training and Participation in Chemical Safety

- Role of employee training and participation in chemical safety.
- Implementing employee involvement and feedback mechanisms.
- Utilizing employee-led chemical safety initiatives.
- Managing employee participation.

Module 13: Continuous Improvement in Chemical Safety

- Strategies for continuous improvement in chemical safety practices.
- Implementing chemical safety program evaluation and improvement methods.
- Utilizing feedback mechanisms and performance metrics.
- Managing continuous improvement.

Module 14: Case Studies: Chemical Safety and Hazardous Materials Management

- Analyzing real-world examples of chemical safety and hazardous materials management.
- Highlighting best practices and effective risk management solutions.
- Documenting project outcomes and impact.
- Industry and chemical safety expert testimonials.

Module 15: The Future of Chemical Safety

- Exploring emerging trends and technologies in chemical safety.
- Integrating digital tools, data analytics, and AI in chemical management.
- Adapting to evolving chemical regulations and industry standards.
- Building resilient and proactive chemical safety systems.