Advanced Hazardous Materials Handling and Storage Training Course



21 - 25 Dec 2026

Cape town

4600 € (Per Person)

Ref: #HSE7141_276828

Course Introduction / Overview:

This comprehensive training course provides an in-depth exploration of the principles and practices for the safe handling, storage, and management of hazardous materials (HAZMAT). In an era of stringent regulatory oversight and heightened safety awareness, mastering HAZMAT protocols is not just a matter of compliance but a critical component of operational integrity and corporate responsibility. This program is designed to equip participants with the essential knowledge and practical skills to mitigate risks, prevent incidents, and respond effectively to emergencies involving hazardous substances. Drawing upon established frameworks from authorities like the Occupational Safety and Health Administration (OSHA) and concepts discussed in seminal texts such as "Managing Hazardous Materials" by Gregory G. Noll, the curriculum covers the full lifecycle of hazardous materials. BIG BEN Training Center has developed this course to move beyond basic theory, focusing on real-world application, risk assessment methodologies, and the development of robust safety management systems. Participants will gain the confidence to implement and oversee HAZMAT programs that protect personnel, the community, and the environment, ensuring a safer and more resilient workplace.

Target Audience / This training course is suitable for:

- Environmental, Health, and Safety (EHS) Managers and Officers.
- Warehouse and Logistics Supervisors.
- Chemical Plant Operators and Technicians.
- Laboratory Managers and Technicians.
- First Responders and Emergency Response Team Members.
- Facility Managers and Operations Directors.
- Shipping and Receiving Personnel.
- Regulatory Compliance Specialists.
- Industrial Hygienists.
- Transportation and Supply Chain Professionals.

Target Sectors and Industries:

- Chemical Manufacturing and Processing.
- Oil and Gas Exploration and Refining.
- Pharmaceuticals and Biotechnology.
- Healthcare and Medical Facilities.
- Logistics, Transportation, and Warehousing.
- Waste Management and Environmental Services.
- Agriculture and Food Production.
- Automotive and Aerospace Manufacturing.
- Governmental bodies including Environmental Protection Agencies and Emergency Services.
- Construction and Demolition.

Target Organizations Departments:

- Environmental, Health, and Safety (EHS) Department.
- Operations and Production.
- Logistics and Supply Chain Management.
- Warehouse and Inventory Control.
- Facilities Management.
- Research and Development (R&D).
- Emergency Response and Crisis Management.
- Quality Assurance and Control.
- Compliance and Regulatory Affairs.
- Maintenance and Engineering.

Course Offerings:

By the end of this course, the participants will have able to:

- Identify and classify hazardous materials according to international and national standards.
- Interpret Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels accurately.
- Implement best practices for the safe storage and segregation of incompatible chemicals.
- Select and utilize appropriate Personal Protective Equipment (PPE) for various HAZMAT scenarios.
- Develop and execute effective emergency response plans for chemical spills and releases.
- Understand and comply with key regulations governing the transportation of hazardous goods.
- Conduct comprehensive risk assessments to identify and mitigate potential HAZMAT-related hazards.
- Establish protocols for the proper disposal of hazardous waste in an environmentally responsible manner.
- Lead and document HAZMAT safety drills and training exercises for facility personnel.
- Foster a proactive safety culture focused on continuous improvement in hazardous materials management.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring that participants can immediately apply their learning in the workplace. This course moves beyond traditional lectures by integrating a dynamic blend of training techniques. Central to our approach are real-world case studies of significant HAZMAT incidents, which are analyzed in group discussions to extract critical lessons on prevention and response. Participants will engage in hands-on workshops and simulation exercises, such as mock spill response drills and PPE selection scenarios, to build practical competence in a controlled environment. Interactive sessions, facilitated by experienced instructors, encourage active participation, knowledge sharing, and problem-solving. Team-based activities will challenge participants to collaborate on developing risk assessments and emergency plans for hypothetical facilities. Continuous feedback is provided throughout the course to reinforce learning and address individual questions. This immersive and participant-centered approach ensures a deep and lasting understanding of hazardous materials management principles.

Course Agenda (Course Units):

Unit One Foundations of Hazardous Materials Management

- Introduction to Hazardous Materials and Associated Risks.
- Overview of Key Regulatory Frameworks (OSHA, EPA, DOT).
- Hazard Communication Standards and the Globally Harmonized System (GHS).
- Understanding and Interpreting Safety Data Sheets (SDS).
- Classes of Hazardous Materials and Their Properties.
- Toxicology and Routes of Exposure.
- Health Effects of Chemical Exposure.

Unit Two Safe Handling and Storage Protocols

- Principles of Chemical Segregation and Compatibility.
- Best Practices for HAZMAT Storage Facilities and Cabinet Design.
- Ventilation Requirements for Chemical Storage Areas.
- Safe Chemical Handling Techniques and Procedures.
- Selection, Use, and Maintenance of Personal Protective Equipment (PPE).
- Engineering Controls for Hazard Mitigation.
- Labeling and Signage for Hazardous Material Areas.

Unit Three Transportation and Waste Management

- Regulations for the Transportation of Dangerous Goods (TDG).
- Placarding, Marking, and Labeling Requirements for Shipments.
- Shipping Papers and Manifest Documentation.
- Introduction to Hazardous Waste Management (RCRA).
- Characterizing and Profiling Hazardous Waste Streams.
- On-site Waste Accumulation and Storage Rules.
- Protocols for Safe and Compliant Waste Disposal.

Unit Four Emergency Preparedness and Spill Response

- Developing a Comprehensive Emergency Response Plan.
- The Role of the Incident Command System (ICS) in HAZMAT Incidents.
- Spill Assessment and Hazard Identification.
- Containment and Control Strategies for Spills and Leaks.
- Cleanup Procedures for Different Types of Materials.
- Decontamination Procedures for Personnel and Equipment.
- Post-Incident Reporting and Investigation.

Unit Five Advanced Risk Management and Program Development

- Conducting a Job Hazard Analysis (JHA) for HAZMAT Tasks.
- Qualitative and Quantitative Risk Assessment Methodologies.
- Developing and Implementing a Written HAZMAT Safety Program.
- Employee Training Requirements and Record-Keeping.
- Auditing and Inspecting HAZMAT Programs for Compliance.
- Medical Surveillance Programs for HAZMAT Workers.
- Principles of Continuous Improvement in Safety Management.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

Beyond regulatory compliance, how can an organization's culture of safety fundamentally transform its approach to hazardous materials management?

What unique qualities does this course offer compared to other courses?

This training course distinguishes itself by adopting a holistic, lifecycle approach to hazardous materials management, moving beyond mere regulatory compliance to instill a deep-seated culture of safety. Unlike programs that focus narrowly on isolated procedures, this course integrates strategic risk management principles into every module, from procurement and handling to disposal and emergency response. We emphasize the "why" behind the regulations, empowering participants with the critical thinking skills needed to adapt to unique and unforeseen challenges in their specific work environments. The curriculum is heavily weighted towards practical application, utilizing advanced simulation exercises and in-depth case study analyses of real-world incidents. This allows participants to test their decision-making abilities in a safe yet realistic setting. Furthermore, the course content is continuously updated to reflect the latest industry best practices, technological advancements in containment and monitoring, and evolving global standards, ensuring the knowledge imparted is not only current but also forward-looking. The focus is on creating proactive safety leaders, not just reactive technicians.