Advanced Industrial Hygiene and Environmental Health Training Course



21 - 25 Dec 2026

Düsseldorf

5900 € (Per Person)

Ref: #ENV6131_100920

Course Introduction / Overview:

This comprehensive course provides an in-depth exploration of the critical principles and practices of industrial hygiene and environmental health. In today's complex industrial landscape, protecting the well-being of the workforce and the surrounding environment is not just a regulatory requirement but a cornerstone of sustainable and ethical business operations. This program is meticulously designed to equip professionals with the skills to anticipate, recognize, evaluate, and control workplace and environmental hazards effectively. Drawing upon foundational concepts articulated by leading experts like Salvatore R. DiNardi in seminal works such as "The Occupational Environment: Its Evaluation, Control, and Management," the curriculum integrates scientific principles with practical, real-world applications. Participants will delve into topics ranging from chemical exposure monitoring and physical hazard assessment to environmental impact analysis and emergency preparedness. BIG BEN Training Center has developed this course to empower attendees to build robust health and safety management systems, ensuring compliance, minimizing risks, and fostering a culture of proactive environmental stewardship and occupational health within their organizations. This training goes beyond mere compliance, aiming to cultivate strategic thinkers who can lead their companies toward excellence in EHS performance.

Target Audience / This training course is suitable for:

- Environmental, Health, and Safety (EHS) Managers and Specialists.
- Industrial Hygienists and Occupational Health Professionals.
- Safety Officers and Engineers.
- Operations and Plant Managers.
- Risk Management and Compliance Officers.
- Public Health Officials and Environmental Regulators.
- Facility and Maintenance Managers.
- Human Resources Professionals involved in workplace safety.
- Consultants in the field of occupational and environmental health.

Target Sectors and Industries:

- Manufacturing and Production.
- Oil and Gas Exploration and Refining.
- Construction and Engineering.
- Chemical and Pharmaceutical Industries.
- Mining and Extraction.
- Healthcare and Laboratory Services.
- Power Generation and Utilities.
- Governmental agencies and regulatory bodies.
- Transportation and Logistics.
- Waste Management and Recycling.

Target Organizations Departments:

- Health, Safety, and Environment (HSE/EHS).
- Operations and Production.
- Engineering and Maintenance.
- Quality Assurance and Control.
- Human Resources.
- Regulatory Affairs and Compliance.
- Research and Development (R&D).
- Facilities Management.
- Corporate Social Responsibility (CSR).

Course Offerings:

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

- Conduct comprehensive workplace hazard assessments for chemical, physical, biological, and ergonomic risks.
- Develop and implement effective hazard control strategies using the hierarchy of controls.
- Master various exposure monitoring techniques and interpret sampling data accurately.
- Navigate and ensure compliance with key national and international EHS regulations.
- Design and evaluate industrial ventilation and noise control systems.
- Perform environmental impact assessments and develop mitigation plans.
- Establish and manage an integrated EHS management system based on international standards.
- Lead emergency response and preparedness planning for industrial incidents.
- Promote a proactive culture of safety and environmental responsibility within the organization.
- Analyze toxicological data to assess health risks associated with workplace exposures.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and centered on adult learning principles to maximize knowledge retention and practical application. This course moves beyond traditional lectures, employing a blended learning approach that combines expert-led presentations with dynamic, hands-on activities. Participants will engage in detailed case study analyses of real-world industrial hygiene and environmental health challenges, allowing them to apply theoretical concepts to practical scenarios. Collaborative group workshops and problem-solving sessions will foster teamwork and encourage the sharing of diverse experiences and perspectives. Interactive discussions, facilitated by our experienced instructors, will explore the nuances of EHS regulations and best practices. Practical exercises, including simulated hazard assessments and risk evaluation drills, will provide participants with the confidence to implement their new skills immediately upon returning to the workplace. Continuous feedback and Q&A sessions are integrated throughout the course to ensure all concepts are clearly understood. This immersive learning environment ensures that participants not only grasp the theory but also master the practical skills needed to excel in their roles.

Course Agenda (Course Units):

Unit One: Foundations of Industrial Hygiene and Environmental Health

- Introduction to Industrial Hygiene and Environmental Health Principles.
- The Role of the EHS Professional in Modern Industry.
- Ethical and Legal Frameworks in Occupational Health.
- Understanding Key Regulations (OSHA, EPA, and Global Equivalents).
- Fundamentals of Toxicology and Human Physiology.
- The AIHA Framework: Anticipation, Recognition, Evaluation, and Control.
- Introduction to EHS Management Systems (ISO 14001 & ISO 45001).

Unit Two: Hazard Recognition and Evaluation

- Chemical Hazard Identification and Safety Data Sheet (SDS) Analysis.
- Techniques for Air Sampling and Exposure Monitoring.
- Physical Hazards Assessment: Noise, Vibration, and Radiation.
- Thermal Stress (Heat and Cold) Evaluation and Management.
- Ergonomic Risk Factors and Workstation Design Principles.
- Biological Hazards in the Workplace and Control Measures.
- Quantitative Risk Assessment Methodologies.

Unit Three: Hazard Control and Mitigation Strategies

- The Hierarchy of Controls: Elimination, Substitution, and Engineering.
- Design and Assessment of Industrial Ventilation Systems.
- Principles of Noise Control Engineering and Abatement.
- Selection, Implementation, and Management of Personal Protective Equipment (PPE).
- Administrative Controls and Safe Work Practices.
- Chemical Process Safety and Management of Change (MOC).
- Developing and Implementing Effective EHS Training Programs.

Unit Four: Environmental Health and Stewardship

- Principles of Environmental Science and Ecology.
- Air Pollution Sources, Monitoring, and Control Technologies.
- Water and Soil Contamination: Assessment and Remediation.
- Industrial Waste Management: Reduction, Recycling, and Disposal.
- Conducting Environmental Impact Assessments (EIA).
- Sustainability Principles and Corporate Social Responsibility in EHS.
- Environmental Permitting and Regulatory Reporting.

Unit Five: Advanced EHS Program Management

- Developing and Implementing an Integrated EHS Management System.
- Leading EHS Audits and Continuous Improvement Processes.
- Emergency Preparedness and Crisis Response Planning.
- Incident Investigation, Root Cause Analysis, and Corrective Actions.
- Communicating EHS Performance to Stakeholders.
- Data Analysis and Metrics for EHS Program Evaluation.
- Future Trends in Industrial Hygiene and Environmental Health.

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:

In an era of rapid technological advancement and emerging contaminants, how can industrial hygiene and environmental health professionals proactively adapt their risk assessment models beyond traditional regulatory compliance?

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

This course distinguishes itself through its holistic and integrated approach, seamlessly weaving together the distinct yet interconnected disciplines of industrial hygiene and environmental health. Unlike programs that treat these subjects in isolation, our curriculum emphasizes the critical link between protecting worker health inside the facility and safeguarding the broader community and environment outside. We move beyond a purely compliance-driven mindset, focusing instead on building strategic EHS leadership capabilities. The content is deeply rooted in practical application, utilizing complex case studies and simulation exercises that mirror the real-world challenges professionals face, from managing chemical exposures to conducting comprehensive environmental impact assessments. Furthermore, the course incorporates forward-looking topics such as sustainable industrial practices, the management of emerging contaminants, and the integration of EHS with corporate social responsibility goals. This strategic perspective equips participants not just with the tools to manage current risks, but with the foresight to anticipate future challenges and drive a culture of continuous improvement and environmental stewardship within their organizations, making them invaluable assets in any industry.