Chemical Exposure & Health Training Course

Professional Development Training Course Outline

Category	Public Health	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Chemical exposure in the workplace is one of the leading causes of occupational illnesses, toxic contamination, respiratory disorders, skin diseases, and long-term environmental health risks. Modern industries such as manufacturing, pharmaceuticals, laboratories, oil & gas, construction, mining, healthcare, and agriculture face increasing challenges related to hazardous chemicals, toxic substances, industrial hygiene, chemical risk assessment, workplace safety compliance, occupational health, environmental monitoring, and hazardous material management. Chemical Exposure & Health Training Course is designed to equip professionals with practical knowledge and advanced safety strategies to identify, evaluate, control, and prevent chemical exposure incidents while ensuring global compliance with OSHA, GHS, REACH, HAZCOM, ISO 45001, and environmental safety standards.

The course delivers industry-focused learning through real-world case studies, emergency response simulations, exposure control techniques, and preventive health management practices. Participants will gain expertise in chemical hazard communication, toxicology, PPE management, exposure monitoring, industrial ventilation systems, biological monitoring, emergency preparedness, risk mitigation, sustainability practices, ESG compliance, workplace wellness, and health surveillance systems. With increasing emphasis on EHS digital transformation, AI-driven safety monitoring, ESG reporting, and sustainable industrial operations, this training empowers organizations and professionals to build safer, healthier, and regulation-compliant workplaces.

Programme Curriculum

Chemical Exposure & Health Training Course

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Course Duration

5 days

Course Objectives

1. Understand Chemical Exposure Risk Management principles and workplace hazard identification.
2. Learn Industrial Hygiene Best Practices for exposure prevention and monitoring.
3. Apply Hazard Communication (HAZCOM) and GHS Compliance requirements effectively.
4. Conduct Chemical Risk Assessments using modern safety frameworks.
5. Improve knowledge of Occupational Toxicology and health impact analysis.
6. Implement PPE Selection & Respiratory Protection Programs for hazardous environments.
7. Develop effective Emergency Response & Spill Control Strategies.
8. Understand Environmental Health & Safety (EHS) Compliance regulations and audits.
9. Analyze Airborne Contaminants & Exposure Monitoring Systems.
10. Strengthen Workplace Wellness & Health Surveillance Programs.
11. Promote Sustainable Chemical Management & ESG Safety Practices.
12. Utilize Digital Safety Tools, AI Monitoring & Smart EHS Systems.
13. Build a proactive Safety Culture & Incident Prevention Framework within organizations.

Target Audience

1. EHS Managers & Safety Officers
2. Industrial Hygienists
3. Chemical Plant Supervisors
4. Laboratory Technicians & Researchers
5. Manufacturing & Production Engineers
6. Healthcare & Pharmaceutical Professionals
7. Environmental Compliance Officers
8. Facility Managers & Operations Teams

Course Modules

Module 1: Fundamentals of Chemical Exposure & Health

- Introduction to chemical hazards and toxic substances
- Types of exposure: inhalation, absorption, ingestion, injection
- Acute vs chronic health effects
- Workplace exposure pathways
- Chemical exposure terminology and classifications
- **Case Study:** Industrial solvent exposure causing respiratory illness in a manufacturing plant.

Module 2: Chemical Hazard Identification & Risk Assessment

- Hazard identification techniques
- Chemical Safety Data Sheets (SDS) interpretation
- Risk matrix and exposure evaluation
- Workplace hazard mapping
- Risk control hierarchy implementation
- **Case Study:** Risk assessment failure leading to toxic gas exposure incident.

Module 3: Industrial Hygiene & Exposure Monitoring

- Air sampling and monitoring techniques
- Biological exposure monitoring
- Industrial ventilation systems
- Exposure limits: OSHA, TLV, PEL standards
- Workplace contamination control methods
- **Case Study:** Airborne chemical contamination in a pharmaceutical facility.

Module 4: Toxicology & Occupational Health

- Principles of toxicology
- Chemical effects on human organs
- Carcinogens and reproductive toxins
- Occupational diseases linked to chemicals
- Health surveillance programs
- **Case Study:** Long-term benzene exposure causing occupational illness.

Module 5: Personal Protective Equipment (PPE) & Safety Controls

- PPE selection and maintenance
- Respiratory protection programs
- Engineering and administrative controls
- Safe chemical handling procedures
- Decontamination techniques
- **Case Study:** PPE failure during hazardous chemical transfer operation.

Module 6: Emergency Response & Spill Management

- Chemical spill response procedures
- Emergency evacuation planning
- Fire and explosion prevention
- First aid for chemical exposure
- Incident reporting and investigation
- **Case Study:** Chemical spill emergency response in a laboratory environment.

Module 7: Regulatory Compliance & Environmental Safety

- OSHA and HAZCOM compliance
- GHS labeling and documentation
- REACH and environmental regulations
- ISO 45001 occupational health systems
- Compliance auditing and reporting
- **Case Study:** Regulatory penalties due to improper hazardous chemical storage.

Module 8: Digital EHS, Sustainability & Future Trends

- AI-driven workplace safety monitoring
- Smart sensors and IoT exposure tracking
- ESG and sustainability integration
- Digital incident management systems
- Predictive analytics for risk prevention
- **Case Study:** AI-based chemical exposure monitoring reducing workplace incidents.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

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