Solid and Hazardous Waste Management Training Course

Professional Development Training Course Outline

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

Course Introduction

Solid and Hazardous Waste Management is a critical discipline in today’s rapidly urbanizing and industrializing world, where ESG compliance, climate resilience, circular economy strategies, and sustainable development goals (SDGs) are shaping environmental decision-making. Solid and Hazardous Waste Management Training Course is designed to equip professionals with advanced knowledge and practical skills in managing municipal solid waste, industrial waste, and hazardous materials using globally accepted frameworks such as ISO 14001 Environmental Management Systems, zero-waste principles, and waste-to-energy technologies.

With increasing concerns around plastic pollution, toxic waste leakage, landfill overload, and environmental health risks, organizations are under pressure to adopt innovative and compliant waste management systems. This course provides a hands-on, competency-based learning experience that integrates policy, engineering, environmental science, and digital waste tracking systems to build future-ready waste management professionals capable of driving sustainability transformation across sectors.

Programme Curriculum

Solid and Hazardous Waste Management Training Course

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5 days

Course Objectives

1. Understand principles of solid waste management lifecycle & circular economy models
2. Apply hazardous waste classification and risk assessment techniques
3. Implement ISO 14001 environmental compliance frameworks
4. Develop integrated waste management systems (IWMS) for urban and industrial settings
5. Master landfill design, operation, and leachate control systems
6. Evaluate waste-to-energy (WTE) technologies and biomass recovery systems
7. Strengthen knowledge of plastic waste reduction and recycling innovations
8. Apply occupational health and safety (OHS) standards in hazardous waste handling
9. Design sustainable waste segregation and collection systems
10. Analyze environmental impact assessments (EIA) for waste projects
11. Promote climate-smart waste management strategies
12. Utilize digital waste tracking and smart waste technologies
13. Support ESG reporting and corporate sustainability compliance

Target Audience

- Environmental officers and sustainability managers
- Municipal solid waste management authorities
- Industrial plant managers and EHS professionals
- Environmental engineers and consultants
- NGO and climate change practitioners
- Public health and sanitation officers
- Urban planners and infrastructure developers
- Students and researchers in environmental sciences

Course Modules

Module 1: Fundamentals of Waste Management Systems

- Types of solid and hazardous waste streams
- Waste hierarchy: reduce, reuse, recycle, recover
- Waste generation and composition analysis
- Global waste management trends and challenges
- Introduction to circular economy principles
- **Case Study:** Municipal waste transformation in a rapidly urbanizing city

Module 2: Waste Characterization & Classification

- Physical, chemical, and biological waste properties
- Hazardous waste identification and labeling systems

- Toxicity and risk profiling techniques
- Waste sampling and laboratory analysis
- Regulatory classification frameworks
- **Case Study:** Industrial chemical waste categorization in manufacturing plants

Module 3: Collection, Segregation & Transportation Systems

- Waste segregation at source strategies
- Collection route optimization techniques
- Smart bins and IoT-enabled monitoring
- Safe transportation of hazardous materials
- Cost-efficiency in logistics systems
- **Case Study:** Smart waste collection system in a metropolitan city

Module 4: Treatment Technologies for Solid Waste

- Composting and anaerobic digestion
- Mechanical and biological treatment (MBT)
- Incineration and thermal processing
- Recycling technologies and material recovery facilities
- Waste-to-energy conversion systems
- **Case Study:** Waste-to-energy plant performance evaluation

Module 5: Hazardous Waste Management & Safety Controls

- Safe handling of toxic and infectious waste
- Storage standards and containment systems
- Spill response and emergency preparedness
- Personal protective equipment (PPE) protocols
- Regulatory compliance and auditing
- **Case Study:** Hospital hazardous waste management system implementation

Module 6: Landfills, Leachate & Environmental Protection

- Sanitary landfill design principles
- Leachate collection and treatment systems
- Methane capture and gas recovery
- Groundwater and soil protection measures
- Post-closure monitoring systems
- **Case Study:** Engineered landfill with methane recovery project

Module 7: Environmental Laws, Policies & ESG Compliance

- National and international waste regulations
- Basel Convention on hazardous waste movement
- Environmental Impact Assessment (EIA) process
- ESG reporting frameworks and sustainability audits
- Corporate waste governance systems
- **Case Study:** ESG-driven waste compliance transformation in industry

Module 8: Smart Waste Management & Future Innovations

- AI and IoT in waste monitoring systems
- Blockchain for waste traceability
- Digital reporting and analytics dashboards
- Climate-smart waste innovations
- Smart city waste integration models
- **Case Study:** AI-enabled smart waste management system in a smart city

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

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