Air Pollution & 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

Air pollution is one of the most critical global environmental and public health challenges, directly impacting respiratory health, cardiovascular diseases, climate resilience, workplace safety, and sustainable urban development. Increasing levels of PM2.5, PM10, greenhouse gases, industrial emissions, vehicular pollution, indoor air contamination, toxic aerosols, carbon emissions, and volatile organic compounds (VOCs) are contributing to millions of premature deaths and severe health complications worldwide. Governments, healthcare organizations, environmental agencies, smart cities, and industries are now prioritizing clean air policies, environmental compliance, ESG sustainability, climate action, carbon neutrality, occupational health, and pollution control technologies to reduce the burden of disease and protect communities. Air Pollution & Health Training Course equips participants with advanced knowledge on air quality management, pollution monitoring systems, health risk assessment, environmental regulations, and innovative mitigation strategies aligned with global sustainability goals.

The Air Pollution & Health Training Course is designed to build practical competencies in identifying pollution sources, understanding health impacts, implementing air quality standards, and promoting evidence-based environmental health interventions. Participants will explore emerging trends such as AI-driven air quality monitoring, IoT-based pollution sensors, smart environmental analytics, sustainable transportation, renewable energy solutions, green infrastructure, climate adaptation, environmental epidemiology, and public health surveillance systems. Through real-world case studies, interactive workshops, and applied learning exercises, the course empowers professionals to develop effective pollution reduction programs, improve community health outcomes, ensure regulatory compliance, and support sustainable development initiatives across urban, industrial, healthcare, and governmental sectors.

Programme Curriculum

Air Pollution & Health Training Course

Introduction

Air pollution is one of the most critical global environmental and public health challenges, directly impacting respiratory health, cardiovascular diseases, climate resilience, workplace safety, and sustainable urban development. Increasing levels of PM2.5, PM10, greenhouse gases, industrial emissions, vehicular pollution, indoor air contamination, toxic aerosols, carbon emissions, and volatile organic compounds (VOCs) are contributing to millions of premature deaths and severe health complications worldwide. Governments, healthcare organizations, environmental agencies, smart cities, and industries are now prioritizing clean air policies, environmental compliance, ESG sustainability, climate action, carbon neutrality, occupational health, and pollution control technologies to reduce the burden of disease and protect communities. Air Pollution & Health Training Course equips participants with advanced knowledge on air quality management, pollution monitoring systems, health risk assessment, environmental regulations, and innovative mitigation strategies aligned with global sustainability goals.

The Air Pollution & Health Training Course is designed to build practical competencies in identifying pollution sources, understanding health impacts, implementing air quality standards, and promoting evidence-based environmental health interventions. Participants will explore emerging trends such as AI-driven air quality monitoring, IoT-based pollution sensors, smart environmental analytics, sustainable transportation, renewable energy solutions, green infrastructure, climate adaptation, environmental epidemiology, and public health surveillance systems. Through real-world case studies, interactive workshops, and applied learning exercises, the course empowers professionals to develop effective pollution reduction programs, improve community health outcomes, ensure regulatory compliance, and support sustainable development initiatives across urban, industrial, healthcare, and governmental sectors.

Course Duration

5 days

Course Objectives

1. Understand the fundamentals of air pollution science, environmental toxicology, and atmospheric chemistry.
2. Analyze the health impacts of PM2.5, PM10, ozone exposure, VOCs, and industrial emissions.
3. Develop expertise in air quality monitoring systems, IoT sensors, and real-time pollution analytics.
4. Interpret global and national air quality standards, ESG compliance, and environmental regulations.
5. Identify major sources of urban pollution, vehicular emissions, indoor air contamination, and industrial pollutants.
6. Apply public health risk assessment, epidemiological analysis, and exposure assessment techniques.
7. Explore climate change mitigation, carbon reduction strategies, and sustainable environmental management.
8. Design effective air pollution control technologies and emission reduction strategies.
9. Implement occupational health and workplace air safety programs.
10. Utilize GIS mapping, AI-driven environmental monitoring, and smart city pollution management systems.
11. Develop community awareness campaigns for clean air initiatives and environmental sustainability.
12. Evaluate case studies on environmental disasters, smog events, and industrial pollution incidents.
13. Strengthen decision-making skills for environmental governance, policy implementation, and health protection programs.

Target Audience

1. Environmental Health & Safety (EHS) Professionals
2. Public Health Officers and Epidemiologists

3. Environmental Engineers and Consultants
4. Occupational Health & Safety Specialists
5. Government Pollution Control Authorities
6. Urban Planning and Smart City Professionals
7. Sustainability and ESG Managers
8. Researchers, Academicians, and Healthcare Professionals

Course Modules

Module 1: Fundamentals of Air Pollution & Environmental Health

- Introduction to air pollution and atmospheric science
- Types of pollutants: PM2.5, PM10, NOx, SOx, CO, VOCs
- Sources of industrial and urban emissions
- Global burden of disease linked to air pollution
- Relationship between climate change and air quality
- **Case Study:** The Great Smog of London and its impact on environmental regulations.

Module 2: Air Pollution Sources & Emission Monitoring

- Industrial emission sources and control measures
- Vehicular pollution and transportation emissions
- Indoor air pollution and household contaminants
- Air quality monitoring equipment and IoT sensors
- Real-time environmental data analytics
- **Case Study:** Delhi Air Pollution Crisis and smart monitoring interventions.

Module 3: Health Impacts of Air Pollution

- Respiratory diseases and lung disorders
- Cardiovascular effects of air pollutants
- Neurological and developmental health risks
- Occupational exposure and workplace hazards
- Vulnerable populations and public health burden
- **Case Study:** Wildfire smoke exposure and respiratory health impacts in California.

Module 4: Air Quality Standards & Environmental Regulations

- WHO air quality guidelines
- National environmental protection regulations
- ESG sustainability and environmental compliance
- Environmental Impact Assessment (EIA) frameworks
- Occupational exposure limits and standards
- **Case Study:** Clean Air Act implementation and emission reduction success stories.

Module 5: Air Pollution Control Technologies

- Industrial air filtration and scrubber systems
- Carbon capture and emission reduction technologies
- Renewable energy and clean fuel transitions
- Smart ventilation and indoor air purification
- Sustainable urban infrastructure solutions

- **Case Study:** Beijing's pollution control and green city transformation initiatives.

Module 6: Climate Change, Sustainability & ESG Strategies

- Climate resilience and adaptation planning
- Carbon neutrality and net-zero initiatives
- Green transportation and smart mobility
- ESG reporting and sustainability metrics
- Circular economy and environmental governance
- **Case Study:** European Union climate action and clean energy transition.

Module 7: Risk Assessment & Public Health Management

- Environmental health risk assessment methods
- Exposure pathway and toxicity evaluation
- Epidemiological surveillance systems
- Public health emergency preparedness
- Community-based pollution prevention programs
- **Case Study:** Bhopal Gas Tragedy and lessons in industrial risk management.

Module 8: Smart Technologies & Future Trends in Air Quality Management

- AI and machine learning in pollution prediction
- GIS mapping and spatial pollution analysis
- Big data analytics for environmental health
- Smart city air quality management systems
- Emerging innovations in clean air technologies
- **Case Study:** Singapore smart city environmental monitoring model.

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:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com