



HSE119

Air Quality in the Environment

Course Introduction:

Air quality is a major area of importance in environmental engineering. Contaminants emitted along an air pathway from industry have been shown to have a major adverse public health effect worldwide. As a result, many government agencies are promulgating and enforcing strict air quality rules, and industrial facilities are employing environmental engineers to minimize emissions, impacts, and exposure to the public. Growing research and case studies have demonstrated a greater understanding of air quality engineering. Strategies and technologies exist to accomplish these goals. There are few “black and white” solutions, however. Engineering decisions to reduce air emissions and impacts draw upon a strong understanding of the technologies available, their effectiveness, cost, and capability of causing auxiliary production and environmental problems.

This course begins with a thorough explanation of the background and history of air quality engineering, followed by discussions of what we know about air emissions, different ways they are calculated, air pollution control (APC) technologies and strategies, factors involved in their ground-level concentrations, and potential health impacts and ways to regulate air emissions. The course is designed to help you understand the basics of air quality engineering and understand its particular language, terms, and approaches.

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- Obtain general knowledge of the legislative and regulatory approaches to air quality in the environment
- Understand the nature and classes of different air pollutants
- Define the different types of emissions into the atmosphere
- Determine the different factors involved in determining ground-level concentration or impacts of air pollutants
- Understand the basic key exposures to air pollutants affecting public health
- Understand the basic public health effects of different types of air pollutants
- Determine the history of air pollutant regulations and their effects on industry and public health
- Explain special topics related to regulating air pollution

Who Should Attend?

This course is intended for environmental engineers, design professionals, APC equipment manufacturers, machinists, inspectors, and construction workers who are interested in gaining a better understanding in air quality.

Course Outline:

Day 1:

Pre-Test

Introduction to Air Pollution

- Emission
- Effect
- Standard

Air Pollution Control Regulation and Monitoring

The Atmosphere

- Air Pollutants
- Global Climate

Day 2:

Air Quality Modeling

- Plume Dispersions

Green House Gases

- Global Climate Issues

Indoor Air Quality

Day 3:

Air Pollution from Mobile Sources

General Idea of Air Pollution Control

Control of Particulates

Day 4:

VOCs and HCs – Characteristic & Control

Oxides of Sulfur and Nitrogen

- Characteristic
- Control

Day 5:

Control of Mobile Sources Pollutants

Case Studies

Post Test

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advised as per the course location. This rate includes participant's manual, and-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

