



# HSE176

## Advanced Industrial Hygiene Training

# Course Introduction:

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Industrial Hygiene (IH) is the science and technology that aims to identify, evaluate and control the occupational health risks in the workplaces. Applying serious IH concepts has been critical for companies to protect worker health, maintain regulatory compliance.

Advanced IH workshops are characterized by discussion of practical down to earth IH issues encountered by thousands of EHS professionals in everyday life. Real life scenarios discussed reflect presenter's extensive experience on literally hundreds of IH projects.

# Course Objectives:

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

- Understand and apply concepts of industrial hygiene
- Distinguish industrial hygiene regulatory trends and guidelines
- Perform hazard identification tasks
- Perform qualitative IH risk assessments
- Understand exposure assessment strategies and methods
- Understand hierarchy of controls and control methods
- Recognize some of the most critical IH issues of today
- Make informed decision to protect employee health

# Who Should Attend?

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This course is intended for company HSE managers and engineers, H&S professionals, human resource managers, occupational health nurses physicians, risk insurance managers, legal professionals and any other individuals with responsibility for employee well-being, labor relations or employee productivity.

# Course Outline:

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## Day 1:

### **Pre-Test**

### **Principles of Industrial Hygiene and Occupational Health**

#### **I. Principles**

##### **Aim:**

- This course surveys current topics in occupational and environmental health. It emphasizes how to protect workers from environmental agents and reduces environmental harm

- Study of sources, routes of absorption and effects of environmental toxicants affecting man and path physiology of toxicant actions including those of air and water pollutants, metals, pesticides, solvents, food toxicants and other chemicals
  - This course is designed to provide participants with instruction in the basic principles of industrial hygiene, stressing the recognition and evaluation of chemical health hazards
- Principles of Occupational and Environmental Epidemiology
  - Principles of Environmental Toxicology
  - Principles of Occupational Toxicology
  - Principles of Industrial Hygiene
  - History of Occupational Health

### **Day 2:**

## **II. Hazards and Occupational Safety**

### **Aim:**

- This course is designed to provide participants with instruction in the basic principles of recognizing and evaluations hazards presented by physical agents in the occupational environment and control of Occupational Hazards
- This course covers the principles and practices of occupational safety. Specific applications in industrial and other occupational settings are presented
- Injury and Violence Prevention

Introduce participants to the theory, research and practice of injury control. Topics include concepts that form the foundation of the study of injury control and prevention the data available, risk factors and prevention approaches.

- Health Hazards of Solvents
- Fundamentals of Pesticides
- Chlorine and Organ Chlorine Compounds
- Lead Poisoning
- Mercury
- Cadmium and Cobalt
- Beryllium
- Manganese
  - Essential Element and Neurotoxin
- Radon Occurrence and Health Risk
- Asbestos
- Silicosis, Coal Worker's Pneumoconiosis and Byssinosis

- Man-made Vitreous Fibers
- Carbon Monoxide and other Combustion Products
- Tuberculosis
- Occupational Lyme disease
- Brucellosis
- Fungal and Related Exposures
- Biologic and Chemical Terrorism
- Work-related Musculoskeletal Disorders
  - Ergonomics and Treatment Options
- Health Hazards Vibration
- Noise and Hearing Conservation

### III. Evaluation and Practical

#### Day 3:

##### Diseases

##### Aim:

- This introduction to occupational health focuses on recognition and prevention of occupational diseases, workplace environmental assessment and control, populations at special risk for occupational disease and injury, legal and regulatory issues in occupational health
- The course will provide participants with skills and knowledge necessary for evaluation and treatment of patients with work-related illness

##### I. Special Groups at Risk

- Occupational Health and Safety for Child and Women Workers
- Petroleum Workers

##### II. Safety Reprehensive Concepts and Training

#### Day 4:

##### Diseases (cont'd)

- Cardiac Toxicology
- Occupational Asthma
- Interstitial Lung Diseases
- Occupational Lung Cancer
- Hypersensitivity Pneumonitis and other Disorders Caused by Organic Agents
- Work-related Carpal Tunnel Syndrome
- Occupational and Environmental Neurology
- Peripheral Nervous System Disease
- Occupational and Environmental Neuropsychological
- Fever at Work

- Work-related Low Back Pain
- Knee Pain
- Nerve Entrapments
- Sleep Disorders causing Daytime Sleepiness
- Psychology and Worker Health
- Organizational Dynamics in the Workplace
- Special Sensory Functions of Smell, Taste and Hearing
- Occupational Eye Injuries and Exposures
- Liver Toxicology
- Multiple Chemical Sensitivity

## **Practical & Discussion**

### **Day 5:**

#### **Petroleum Industry, Risks and Safety**

##### **I. Practice of Occupational Medicine**

- Pulmonary Function Tests
- Workplace Smoking and Drug and Alcohol Use
- Workforce Violence
- Disability Evaluation
- Occupational Medicine and the Law

##### **Revision**

##### **Evaluation & Discussion**

##### **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:

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

## Course Timings:

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### Daily Course Timings:

08:00 - 08:20	Morning Coffee/Tea
08:20 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Coffee/Tea/Snacks)
13:30 - 15:00	Last Session

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