

H S E

HEALTH

SAFETY

ENVIRONMENT



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Core Concepts in Industrial Hygiene

Duration: 5 Days

Introduction:

Industrial hygiene can be defined as the art and science devoted to the anticipation, recognition, evaluation, communication and control of environmental stressors in the work place that may result in injury, illness or impairment of workers and members of the community. These

stressors are divided into the categories biological, chemical, physical, ergonomic and psychosocial. The profession of industrial hygiene uses strict and rigorous scientific methodology to determine the potential for hazard and exposures in the workplace.

This course emphasises the recognition, evaluation, and control of occupational health hazards. Topics include hazard recognition, health standards, air sampling, ventilation, noise exposure, and temperature stress. Upon completion, students should be able to identify and quantify common occupational health hazards.

Methodology

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation

- Case Studies and Practical Exercise
- Videos and General Discussions

Certificate

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration.

Who Should Attend?

- Occupational Health Nurse
- Health and safety committee members
- Operations and Maintenance Managers
- Plant Managers and Supervisors
- Safety Managers

Course Objectives:

- Understand the basic principles of toxicology.
- Evaluate the potential of chemical agents to produce dermatitis.
- Understand the potential hazards of industrial dusts, mists, and fumes.
- Understand the principles of personal air sampling.
- Select appropriate ventilation systems for a particular hazard.
- Select appropriate respiratory protection for a particular hazard.
- Implement an OSHA mandated hearing conservation program.
- Assist in the performance of an indoor air quality investigation.

Course Outline:

DAY 1

Toxicology basics & Occupational Skin Diseases:

- Classes of toxic effects
- Measuring toxicity
- Toxicokinetics
- Skin anatomy
- Irritant contact dermatitis
- Allergic contact dermatitis
- Other skin diseases
- Prevention of occupational dermatitis

DAY 2

Respiratory Hazards & Industrial Hygiene evaluation & air monitoring:

- Anatomy and physiology of the respiratory system
- Particle deposition mechanisms
- Pneumoconioses
- Occupational asthma
- Hazards of gases and vapours
- Units for air contaminants
- Area vs. personal sampling
- Analytical methods

DAY 3

Control of airborne hazards: ventilation & respiratory protection:

- Types of ventilation systems
- Components of local exhaust systems
- Types of hoods
- Air cleaners, fans, and stacks
- Types of respirators
- Selection of respirators
- Respirator programs

DAY 4

Confined space standard & Occupational noise exposure:

- Definitions
- Examples of confined spaces
- Written program elements
- Duties of defined individuals
- Rescue
- Anatomy of the ear
- Physics of sound
- Measurement of sound
- Standards and Hearing Conservation Program
- Control of occupational noise hazards

DAY 5

Temperature Stress:

- Control of body temperature
- Illnesses caused by temperature extremes
- Evaluating heat and cold stress
- Exposure standards