Introduction:

The **Certified Industrial Hygiene Program** provides a comprehensive foundation in industrial hygiene, covering the core concepts of anticipating, recognizing, evaluating, communicating, and controlling workplace conditions that can cause occupational diseases and illnesses. This program is essential for individuals and managers seeking to enhance their knowledge of industrial hygiene practices.

In the introductory unit, participants will explore the role of an industrial hygienist, including understanding the **Certified Industrial Hygienist** (CIH) certification requirements and the responsibilities involved in this critical safety profession.

Targeted Groups:

- **Safety, Health, and Environment Personnel**
- **Management Personnel with Industrial Hygiene Responsibilities**
- **Personnel in Catering and Office Environments**

Course Objectives:

Upon completion of this course, participants will be able to:

1. Understand and apply the fundamental concepts of industrial hygiene.
2. Perform tasks related to **hazard identification** in the workplace.
3. Gain in-depth knowledge of key industrial hygiene topics.
4. Recognize various occupational diseases and illness conditions.
5. Learn how to anticipate, recognize, evaluate, communicate, and control health hazards in the workplace.

Targeted Competencies:

By the end of this course, participants will have developed competencies in:

- **Occupational Hygiene Program Principles**: Understanding how to create and manage effective health programs.
- **Health Hazards**: Identifying biological, chemical, and physical health risks.
- **Essential Sciences**: Knowledge of human anatomy, biology, and the chemical effects of substances.
- **Occupational Diseases**: Understanding the types and causes of work-related illnesses.
- **Health, Sampling, Measurement, and Evaluation Techniques**: Mastering techniques used for hazard identification and risk evaluation.

Course Content:

Unit 1: Introduction to Industrial Hygiene

- What is **industrial hygiene**?
- Overview of **industrial hygiene management systems**.
- Understanding **occupational exposure standards**.
- Exploring various **health risks** in the workplace.
- Identifying common **occupational diseases** and illness conditions.

Unit 2: Understanding Health Risks

- The **human system**: Skeleton, muscles, nerves, circulation, respiratory, skin, and sense organs.
- **Methods of identifying health risks**:
  - **Biological risks** (e.g., bacteria, viruses).
  - **Chemical risks** (e.g., exposure to toxic substances).
  - **Physical risks** (e.g., noise, temperature extremes).
  - **Radiation risks** (e.g., ionizing and non-ionizing radiation).

Unit 3: Industrial Toxicology

- **Exposure routes** to hazardous substances: inhalation, ingestion, absorption.
- **Health effects** of hazardous substances and their classification:
  - **Toxic, irritant, asphyxiant**, and **anesthetic** substances.
  - **Hepatotoxic** (liver), **Nephrotoxic** (kidney), and **Neurotoxic** (nervous system) agents.
  - **Blood-damaging agents** and **lung-damaging agents**.

Unit 4: Measuring and Evaluating Health Risks

- Techniques for **recognizing potential health risks** in the workplace.
- **Sampling methods** for gases, vapors, and particulates.
- Conducting **walk-through surveys** to identify hazards.
- Establishing and managing **health surveillance programs**.
- Performing **health risk assessment reviews** and identifying **control methods**.

Unit 5: Monitoring and Recording Health Risk Controls

- **Biological monitoring** and **medical surveillance** for workers.
- Implementing **hearing conservation programs** for noise-related risks.
- Designing **occupational disease prevention programs**.
- Learning from **incidents of ill health** and improving practices.
- A **step-by-step guide** for managing and controlling health risks in the workplace.