# Introduction:

Working in confined spaces presents significant risks, and despite awareness of these dangers, fatalities and injuries still occur each year. Many accidents happen due to lack of proper training or unsafe decision-making. Confined spaces may need to be accessed for maintenance, repair, or inspections, and it is crucial to ensure that personnel involved are fully aware of the potential hazards and know how to mitigate them.

This **Confined Space Entry and Safety Compliance Training** course aims to provide participants with the critical knowledge required to develop, implement, and maintain a safe confined space entry program. Participants will also gain certification in confined space awareness, demonstrating their proficiency in understanding and adhering to safety protocols.

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## Targeted Groups:

- **Safety Personnel**
- **Planning Engineers**
- **Entry Supervisors**
- **Authorized Entrants**

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## Course Objectives:

At the end of the course, participants will be able to:

1. Understand OSHA and Confined Space Regulations, including the 1997 Approved Code of Practice by HSE.
2. Identify the hazards associated with confined spaces and how to mitigate them.
3. Ensure all necessary precautions are taken before entering a confined space.
4. Maintain a safe working environment within confined spaces throughout the job.
5. Understand the methods used for cleaning and isolating confined spaces before entry.

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## Targeted Competencies:

By the end of this course, participants will be capable of:

- Understanding **OSHA standards** for permit-required confined spaces.
- Applying the **HSE Standard on Confined Space Entry**.
- Recognizing the **inherent hazards** in confined spaces.
- Taking the necessary precautions before and during entry.
- Creating a **safe system of work** for confined space entry.

- Identifying the **health hazards** involved in confined space tasks.
- Ensuring the proper **training** for all personnel involved in confined space entry.

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## Course Content:

**Unit 1: Introduction, Definitions, and Risk Assessment**

- Overview of the course and definitions of **OSHA terminology** related to confined spaces.
- Conducting **risk assessments** for confined space entry.
- Understanding **Work Permit Systems** and their importance.
- Working with contractors and their role in confined space safety.

**Unit 2: Occupational Health Hazards in Confined Spaces**

- Identifying **occupational health hazards** in confined spaces, including:
  - **Chemical substances** and their associated risks.
  - **Physical hazards**, such as extreme temperatures or poor ventilation.
  - Specific hazards like **H2S** (Hydrogen Sulfide) and **pyrophoric iron**.
- Discussing proper **washing and changing facilities** and managing **contaminated areas**.

**Unit 3: Atmospheric Testing, Cleaning, and Emergency Arrangements**

- Learning about **atmosphere testing** to ensure safe air quality.
- Understanding the process of **cleaning confined spaces** before entry, including the use of gases and chemicals.
- Exploring **gas freeing** techniques for tanks and vessels.
- Implementing **positive isolation**, **lockout/tagout** procedures, and maintaining isolation.
- Preparing and training for emergency situations, including **rescue arrangements**.

**Unit 4: PPE, Common Tasks, and Maintaining Safety**

- Learning the proper use of **Personal Protective Equipment (PPE)**.
- **Entry with and without breathing apparatus** and understanding the required equipment.
- Ensuring **ventilation** and **lighting** are adequate for safe work in confined spaces.
- Discussing common maintenance tasks and problems that arise in confined spaces (e.g., furnaces, vessels, tanks).
- Understanding the importance of **checklists**, **boxing up**, **handover procedures**, and **de-isolation**.

**Unit 5: Table Top Exercise**

- Participating in a **desktop syndicate exercise** where participants plan a confined space entry.
  - Reviewing the **Process Flow Diagram (PID)** and other written details

of the process.
- Programming the required **steps and precautions** for entry, cleaning, and maintenance.
- Developing procedures for **de-pressurization**, **initial isolation**, **gas freeing**, and **positive isolation**.
- Ensuring the correct **PPE** is selected and properly used.
- Conducting a **presentation and discussion** to review the planning process and identify improvements.