GLOBAL TRAINING INSTITUTE

Industrial Safety Engineering



GTI - Coordination Office and International Relations (Accredited Programs)

Course Description

The Industrial Safety Engineering course offers a comprehensive overview of safety engineering principles, particularly within the oil and gas industry. This program is designed for individuals aspiring to enter the field of safety design, providing essential knowledge about safety norms, engineering practices, and relevant industry standards. Participants will explore critical safety concepts, including fire and gas detection, risk assessment methodologies, and hazardous area classification, equipping them with the tools necessary to enhance safety in industrial environments.

Who Should Attend

This course is suitable for:

- Recent graduates and New employee seeking to expand their knowledge in workplace safety standards.
- Safety officers and coordinators in training.
- Students and graduate engineers in chemical or mechanical disciplines.
- Conversion engineers transitioning to safety engineering from other fields.
- Managers and supervisors responsible for workplace safety.
- Diploma holders in chemical or mechanical engineering.
- Entry-level technicians in chemical or mechanical fields.
- Apprentices in engineering disciplines.
- Laboratory assistants and support staff in chemistry.

Course Objectives

By the end of this course, participants will be able to:

- Understand the fundamental concepts of safety engineering.
- Recognize the processes and issues involved in safety design.
- Identify materials and equipment used in safety engineering.
- Interpret industry terms and acronyms related to safety.
- Conduct quantitative and qualitative risk assessments.
- Develop fire and gas detection layouts and firefighting strategies.
- Classify hazardous areas and create escape route layouts.

Course Content

Introduction to Safety Engineering

- Overview of safety engineering and its scope.
- Importance of health, safety, and environmental (HSE) planning.

Fire and Gas Detection Systems

- Philosophy of fire and gas detection.
- Layout planning for detectors and firefighting equipment.
- Fire water demand calculations.

Risk Assessment Methodologies

- Conducting HAZOP (Hazard and Operability) and HAZID (Hazard Identification) sessions.
- Performing quantitative and qualitative risk assessments.

Noise Control Management

- Understanding noise control philosophy and regulations.
- Conducting ambient noise surveys and generating reports.

Hazardous Area Classification

- Creating hazardous area classification layouts and schedules.
- Developing P&ID (Piping and Instrumentation Diagrams) for safety systems.