



ADVANCED RISK MANAGEMENT & CAUSE TREE ANALYSIS

Highly Intensive, Interactive & Practical Training Course

COURSE OVERVIEW:

The course will be fully interactive, requiring delegate participation in studying the topics of Root Cause Analysis techniques aimed at improving competency in accident investigation. The course will provide up to date knowledge of investigation procedures based upon the data provided by modern risk management systems.

This programme will be aimed to provide hands-on experience in the practical application of modern accident investigation and analysis techniques. Particular emphasis is placed on the application of Cause Tree Analysis 'CTA' (also known as Fault Tree Analysis). Proactive and reactive performance measurement will be used in integrating action plans within HSE Management System.

COURSE OBJECTIVES:

By the end of this training, participants will have thorough understanding of the principles of risk management, CTA/FTA, accident investigation and root cause analysis.

MAJOR TOPICS TO BE COVERED:

- ▶ The role of accident investigation and analysis
- ▶ Framework for accident investigation
- ▶ Root-Cause Analysis techniques
- ▶ Cause Tree Analysis 'CTA'
- ▶ Preparation of action plans

AUDIENCE:

This course is aimed at those wishing to improve on their current knowledge of accident investigation and analysis; root causes analysis techniques and CTA/FTA. All students attending should have a good command of the English language as this course is intensive.

COURSE OUTLINE:

The following course structure will be supported where appropriate with audio-visual aids, workshops, interactive discussion and activities.



Students will be expected to attend the entire course and return promptly after lunch/refreshment breaks. Students will be advised of the general health and safety requirements and daily routine for the course at the start (i.e. no mobile telephones, no smoking, where the fire exits are etc).

Introduction

- ▶ The nature of accidents
- ▶ Risk management systems and faultfinding
- ▶ Cause and Effect
- ▶ Failure Mode and Effects Analysis
- ▶ Fault and Event Trees
- ▶ Hazard Operability Studies

Human Factors

- ▶ Man/machine interface
- ▶ Human capabilities
- ▶ Equipment design considerations
- ▶ Working environments
- ▶ Organisational work environment

Root Cause Analysis

- ▶ The benefits of accident investigations
- ▶ The preparation phase
- ▶ The implementation phase
- ▶ The investigation phase
- ▶ Initial activities
- ▶ Formal investigation activities
- ▶ Preservation of evidence
- ▶ Evidence categories
- ▶ Interview guidelines
- ▶ Information records
- ▶ Physical environmental records

Research/Analysis Phases & Management Actions

- ▶ The Research Phase
- ▶ The Analysis Phase
- ▶ Root causes
- ▶ System causes
- ▶ Techniques of analysis
- ▶ The Corrective Phase
- ▶ Final Actions
- ▶ Management Responsibility
- ▶ Final Management Actions

Report Writing & Audit/Review Phases

- ▶ The Report
- ▶ Reporting the results
- ▶ Writing the report
- ▶ Report format and content
- ▶ Disclaimer
- ▶ Report acceptance
- ▶ Submission of report
- ▶ Audit and Review
- ▶ Review of Course