



# HSE177

## Firefighting Strategy and Plant Protection

## Course Introduction:

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This course will expose participants to the field of fire science, in particular the study of firefighting strategies. This course is an integral part of the emergency services program and is necessary to provide participants the understanding of the importance of the incident command system on the fire scene.

The theory is supported by practical application utilizing the various live fire training equipment to create fires that can be attacked allowing participants to experience a variety of equipment. The practical training will provide participants a firsthand understanding the different operational tactics and techniques that can be used to assist dealing with these types of unique emergencies.

## Course Objectives:

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**Upon successful completion of this course, the delegates will be able to:**

- Apply procedural strategies on firefighting and plant protection
- Explain the nature and chemistry of fire
- Discuss fire codes and standards and fire prevention
- Identify fire detection systems used and learn the theory of firefighting and prevention
- Discuss the designs of fire safe, operational principles of firefighting and water as a firefighting agent
- Apply the modern methods of combating fire, theory of action, testing and fire hazards
- Determine the types of fire hazards and fire hazard control in firefighting

## Who Should Attend?

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This course is intended to all firefighters, fire wardens, safety committee members, in-house firefighting team and security personnel who need to ensure fire safety procedures are in place.

## Course Outline:

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### Day 1:

#### **Pre-Test**

- The Nature & Chemistry of Fire
- International Fire Codes for Materials
- Causes & Sources of Fire Outbreaks
- The Chemistry of Fire
- Fire prevention in the planning stage:
  - The objectives of fire prevention

- Foundations and the requirements of the fire prevention

### **Day 2:**

- Overview of fire detection systems
  - Automatic detectors
  - Multiplex
  - Control unit terminal etc.
- The theory of fighting fire
- Fire Prevention vs. Fire Fighting
- Design of Fire Safe:
  - The impact of the requirements of fire protection design
  - Retail areas of the building to contain the fire
  - Members of the fire resistance
- Operational principles of firefighting
  - Starvation
  - Smothering
  - Cooling or heat reduction
- Water as a firefighting agent
  - Properties
  - Theory of action
  - Application methods

### **Day 3:**

- Modern methods of combating fires resulting from the extension of networks
- Fire Protection:
  - Means of fire and fire; and devices used for warning and early detection
  - Practical training on the operation of the network using the network simulator training
  - Specifications, Theories of extinguishing fire, properties application methods (testing)
- Dry chemical powder "Types "
- Specifications/properties, theory of action
- Application methods
- Carbon Dioxide

### **Day 4:**

- Specifications
- Theory of Action
- Application methods "Testing"

- Environment Clean Agents
- Specifications
- Theory of Action, Testing, Fire Hazards

#### **Day 5:**

- Identifications of Fire Hazards
- Fire Hazard Control
- Introduction to Fire Risk Calculations
- Fire Risk Assessment
- Fire Risk Calculations
- Cases Study

#### **Post Test**

## **Course Certificate:**

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**International Center for Training & Development (ICTD)** will award an internationally recognized certificate(s) for each delegate on completion of training.

## **Course Methodology:**

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**A variety of methodologies will be used during the course that includes:**

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

## Course Fees:

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**To be advised as per the course location.** This rate includes participant's manual, Hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

## Course Timings:

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### Daily Course Timings:

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|---------------|----------------------------|
| 08:00 - 08:20 | Morning Coffee/Tea         |
| 08:20 - 10:00 | First Session              |
| 10:00 - 10:20 | Recess (Coffee/Tea/Snacks) |
| 10:20 - 12:20 | Second Session             |
| 12:20 - 13:30 | Recess (Coffee/Tea/Snacks) |
| 13:30 - 15:00 | Last Session               |

