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# Course: International Fire Incident Investigation

Code	City	Hotel	Start	End	Price	Language - Hours
588	Zurich (Switzerland)	Hotel Meeting Room	2025-02-24	2025-03-28	6450 €	En - 25

## ABOUT THE COURSE

Fire Incident Investigations are conducted to protect and preserve evidence at a fire (and therefore a potential crime) scene. This course is designed to provide an introduction to Fire Investigation and centres on scene preservation and the causes of fire. Utilising International best practice the course will promote an awareness of the need to identify and investigate the scene of suspicious/accidental fires and the need to liaise with other responding agencies to determine how they respond and work together to extinguish a fire, treat casualties, make the site safe, and preserve and examine the evidence. Delegates will develop an understanding of the chemistry of combustion, the stages and disciplines involved in reconstructing and documenting events to determine the causes of fire.

The analysis of a fire scene not only requires the investigator to determine the origin of the fire but also the cause and how the fire developed, the fire's probable route of spread through a building and how it was extinguished. It is one of the more challenging areas of forensic science due to the multi-disciplinary nature of the investigator's job as fires can be caused by, or involve, everyday items, the investigator also need to understand many other disciplines, such as prevention, construction, electricity, gas and even human behaviour. And ultimately therefore can be called to court as expert witnesses.

- Introduction to International Fire Scene Investigation
- Fire Prevention, Construction and Evacuation Plans
- Fire Chemistry, Combustion and Behaviour
- Safety and Management at the Fire Scene



- Analysis of Fire patterns, origins, cause, scene preservation & Reports

## **YOU WILL LEARN**

### **Upon Completion of the Course, Participants will be able to:**

- Understand the roles and responsibilities of all Emergency Responders
- Methods of fire scene investigation and security.
- USA NFPA 921 / 1033 & UK Chief Fire Officers Association Procedures
- Fire and Explosion Dynamics
- Collection and Preservation of Evidence
- Origin Determination and application of burn patterns
- Determination of Electrical Fire Causes

## **DESIGNED FOR**

This introductory course has been designed to provide those personnel who are, or will become responsible for Fire Investigation within their organisation. Fire-fighters, law enforcement, security personnel, insurance company loss adjusters, supervisors and those managers responsible for the process but who may not have had sufficient time to devote to the subject.

## **The Process**

Delegates will be encouraged to fully participate in this new programme through the use of syndicate work and presentations, group discussions and questionnaires. PowerPoint slides, training DVD's and case-studies will be fully utilised. The seminar will include a comprehensive manual incorporating the full text and a copy of all slides in addition to a CD.

## **The Benefits**



- How to identify and investigate a suspicious/accidental fire scene
- Understand the proper procedure for securing a fire scene
- Understand proper evidence collection techniques and the importance of evidence preservation
- Understand the chemistry of combustion and extinction
- Understand how safety aspects of building construction and design relates to fire prevention and Safety
- Define and explain the common terms used in fire investigations.

## **The Results**

- Document an emergency scene, in accordance with international best practices and legal requirements
- At the end of the course; the student will be able to successfully undertake a Fire Investigation using a systematic approach of the scene
- The student will be able to identify, preserve and collect many types of potential evidence using the methods discussed in the course
- Demonstrate a technical understanding of characteristics and impacts of fire loss and the crime of arson necessary to conduct competent fire/emergency investigations and analysis.

## **The Core Competencies**

### **Participants in the programme will develop the following competencies:**

- Understand the reasons for accurate fire scene investigation
- Understand the physical property of fire and its effects on fuels present at a fire scene
- Understand the application of burn patterns to the area or point of fire origin
- Understand sources of ignition and its application to the fuel present
- Know various methods of fire scene security



# COURSE CONTENT

## Day One : Introduction to International Fire Investigation

- The Cost of Fires - International Fire Loss Statistics
- The role of the first responders at the scene?
- Command and Control at the scene, Incident Commander
- Guide to Best Practice. USA NFPA 921 & 1033 and UK Procedures
- Classification of Fire; Fire Prevention & Risk Assessment
- Building Construction & Design & Fire/Emergency Evacuation Plans
- Case Study

## Day Two : Incident Indicators and Cause Determination

- What is the origin and cause of the fire
- Structures
- Vehicles
- Explosions
- Accidental Fire Causes
- Basic Principles of Electricity and Electrical Fires
- Cigarette-caused Fires
- Case Study

## Day Three : Fire Investigation

- Fire Investigation in Action
  - Conducting the Investigation
  - How to collect, preserve and report evidence. Consider the use of Trained Fire
  - Investigator Dog Teams
  - Observations When Approaching the Scene
  - Observations upon Arrival



- Observations during Firefighting Operations
- Accurately sketch a fire scene
- Understand proper methods for photographing a fire scene
- Fire Investigator Responsibility - Questionnaire
- Types of Evidence
- Direct
- Circumstantial
- Evidence Handling
- Chain of Evidence
- Courtroom Evidence

## **Day Four : Human Behaviour in Fires**

- Evacuations
- Alarm Response
- Witness Interviews
- Death Investigations
- Sociological and cultural factors
- Potential Psychological Issues in Fire Investigations
- Case Study

## **Day Five : Evaluation, Reports and Records**

- Preparing the Fire Incident Report - what is required
- Judgment and Decision Making
- Coordinate efforts with other organisations in Preparing for Court
- Subpoena witnesses, property owners/occupants to obtain sworn testimony
- Prosecution and Defence Techniques, Testifying in Court Cases
- Testifying as an Expert Witness
- Review of the course - Time Permitting



**The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

• **Theoretical Lectures:**

- We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.

• **Scientific Assessment:**

- We evaluate trainees skills before and after the course to ensure their progress.

• **Brainstorming and Interaction:**

- We encourage active participation through brainstorming sessions and applying concepts through role play.

• **Practical Cases:**

- We provide practical cases that align with the scientific content and the participants specific needs.

• **Examinations:**

- Tests are conducted at the end of the program to assess knowledge retention.

• **Educational Materials:**

- We provide both printed and digital scientific and practical materials to participants.

• **Attendance and Final Result Reports:**

- We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

• **Professionals and Experts:**

- The programs scientific content is prepared by the best professors and trainers in various fields.

• **Professional Completion Certificate:**

- Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.

• **Program Timings:**

- Training programs are held from 10:00 AM to 2:00 PM and include coffee break sessions during lectures.