



## *The Manchester Centre for Training and Consultancy*

( MCTC )

The Manchester Centre for Training and Consultancy is a UK training and consultancy centre. In the fields of training and education the United Kingdom has a worldwide reputation and is a leader among the developed countries, a fact which makes the UK the most successful country in the world for attracting hundreds of thousands of students, trainees and researchers globally every year. Due to the quality and deep-rootedness of its academic and educational institutions, the UK stands among the top rank of countries in all kinds of training and academic programs. In respect of forensic science and security issues as general there is a large demand in all countries over the world for forensic science services for the sake of preventing and resolving numerous crimes. On the basis of the above, MCTC aims to promote the cooperation with other countries, companies or individuals to achieve a high training standard , education and consultancy in the field of security, policing and forensic science. We have an excellent relationship with high-ranking universities, training centres, and specialist training consultancy centres to ensure that our clients get the optimum benefit from all the courses, programs and services we provide.

- **Our services:**

- 1- Training services.
- 2- Education services.
- 3- Legal & forensic consultancy services.
- 4- Management services.
- 5- Quality consultancy and competency assessment.

- **Our partners include:**

- High rank UK universities provide high quality training course in policing, security and most aspects of forensic science.
- Specialized independent centres in all aspects of forensic science professional training.
- The leading organization bodies specializing in security, policing and forensic consultancies and competency assessment.



## OUR TRAINING COURSES



### 1- Protecting Major Construction Against Terrorism.

#### **Course aim:**

To provide the delegate with an understanding of countering hostile reconnaissance and counterterrorism strategies and methodologies, and to exercise the practical aspects of these subjects.

#### **Course contents:**

1. Protection of the Facility – The Threat Assessment.
2. Terrorism Risk Analysis.
3. Terrorist Attack Hostile Reconnaissance - Theoretical and Practical Session.
4. Special Conditions when Protecting Critical Infrastructure.
5. Vulnerable Point Surveying.
6. Counter-Terrorism Facility Searching.
7. Intelligence Gathering.
8. Table top Command and Control Exercise.
9. Interdiction of Potentially Hostile Adversaries.
10. Counter Terrorism Search - why, how, when?.
11. Applying protective Measures.



## **2- Quality management in forensic laboratories implementing ISO/IEC 17025**

## **3- Internal audits in forensic laboratories implementing ISO/IEC 17025**

### **Course Aim:**

- To provide delegates with an awareness of the requirements of ISO/IEC 17025 and the establishment of a management system capable of achieving accreditation.
- To provide a forum for discussion of 'best practice' for laboratory accreditation.

### **Course Benefits:**

- Delegates will have a greater understanding of the requirements of ISO/IEC 17025.
- Understanding quality manager and technical management roles in forensic laboratories.
- Understanding of how to develop a management system that meets the needs of the organisation, complies with the requirements of ISO/IEC 17025 and any additional requirements for accreditation.



## **4- Border and Immigration Control**

### **Course aim:**

To give participants a good understanding of the functions of immigration controls, the threats they face and the importance of travel and identity documents in the control process.

### **Course Outline:**

A comprehensive examination of the function and operations of immigration controls on both a national and international perspective focusing on the importance of secure travel documentation and of identifying and detecting document abuse. This will include consideration of global (ICAO) standards for travel documents and how these assist the secure facilitation of international travelers through border controls.





## 5-Crime Scene Investigation

### **Course aim:**

To give participants recognised best practice skills required to be a scene of crime investigator.

### **Course outline:**

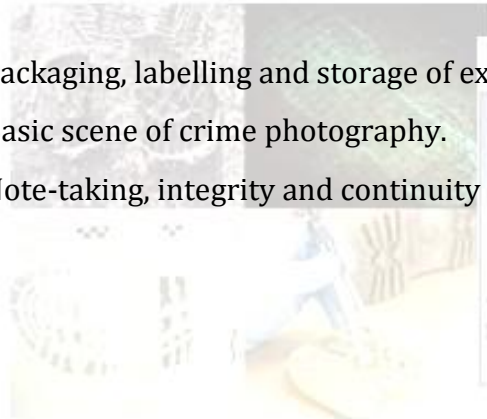
Training in Standard Operating Procedures for the forensic examination of various types of crime scenes such as burglary, offences against the person and vehicle crime, emphasising best practice in the recovery of evidence. The course is supported throughout by numerous realistic practical exercises to ensure a full understanding is established.

### **Course Contents:**

- Health and safety at crime scenes.
- Identification of fingerprints, methods of recovery and recording from various surfaces. Identification, recovery and recording of a variety of physical evidence.
- Techniques for locating and enhancing footwear marks.
- Use of recovery techniques for a variety of crime scene stains.
- DNA recovery and preservation.



- Packaging, labelling and storage of exhibits.
- Basic scene of crime photography.
- Note-taking, integrity and continuity statements.





## **6-Disaster Management**

### **Course aims:**

- Encourage integrated planning and risk reduction activities amongst and between the emergency services, government agencies, military and relevant civilian agencies and community groups.
- Promote disaster management planning within wider national development strategies.
- Ensure that effective major incident management systems are in place to respond quickly to, and recover from, a range of disasters when they occur

### **Courses Contents:**

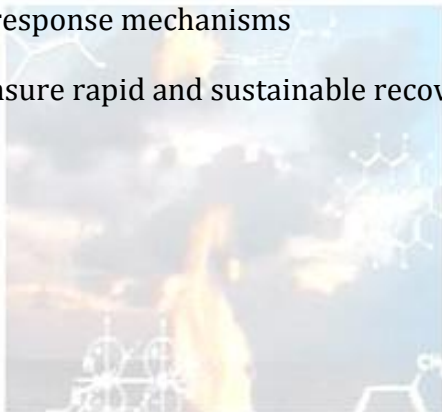
- Definitions and concepts
- Risk reduction and sustainable recovery
- Risk analysis, hazards and vulnerabilities
- The roles of key players
- Institutional structures
- Decision-making systems
- Information management
- Early warning systems and evacuation



- Problem analysis and planning
- Impact on, and recovery of, tourism
- Media management
- Public awareness strategies
- Environmental issues
- Post-disaster enquiries and investigation
- Project development and management
- Development and disaster links.

**Outputs:**

- Improve their existing systems
- Review and improve their plans
- Bring up-to-date best practice into their work
- Reduce pre-disaster risks
- Improve response mechanisms
- Help to ensure rapid and sustainable recovery.





## 7-Computer Forensic Investigations

### **Course Aim:**

Gain an understanding of computer forensics analysis by learning about forensic principles, evidence continuity and methodology to employ when conducting a forensic investigation.

### **Course Outline:**

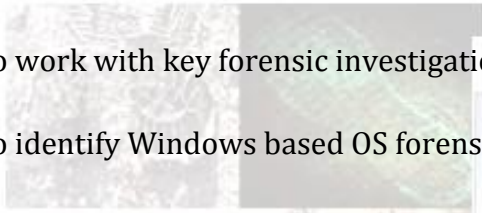
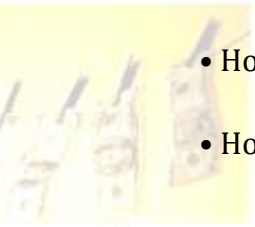
Forensic Computer Investigation is highly technical and hands-on course which provides delegates with the opportunity to develop expertise in the field of forensic analysis. Using a practical scenario, delegates will be guided through the process of conducting a forensic investigation and will learn the principles surrounding the collection of evidence, together with the forensic tools associated with forensic analysis.

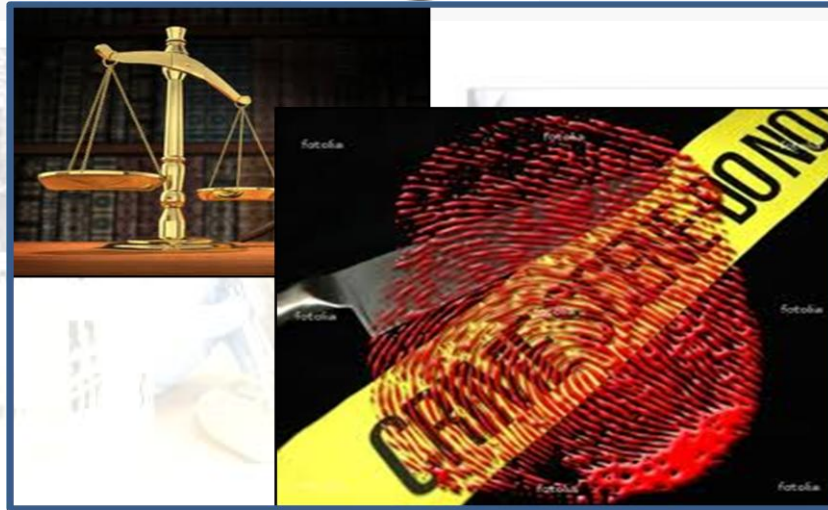
### **Course contents:**

- The principles and guidelines for computer forensic investigations
- The process of evidence continuity
- The fundamentals of the complete forensic investigation process
- The forensic acquisition of an electronic device



- How to store data on electronic media.
- How to work with key forensic investigation products
- How to identify Windows based OS forensic artifacts.





## **8- Fingerprint Comparison & Preparation of Evidence**

### **Course Aim:**

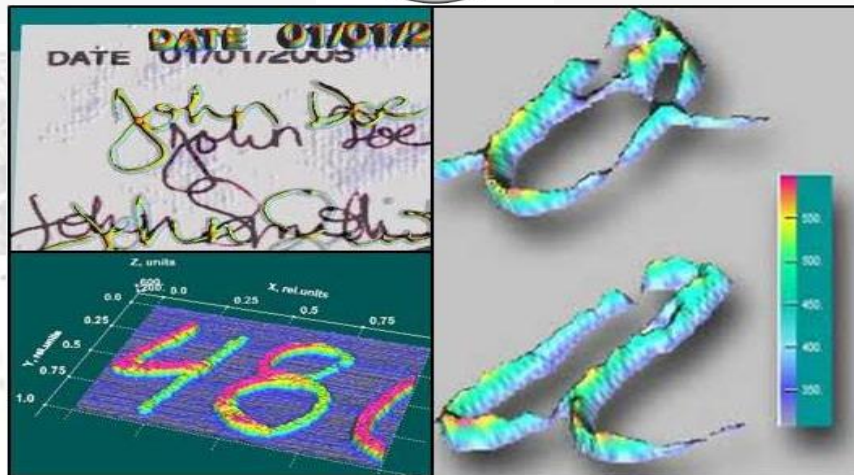
This course will enable participants to develop the skills required to prepare statements and to testify as a fingerprint expert witness.

### **Course Outline:**

This course will cover latent fingerprint development, recovery, comparison and courtroom testimony. As well as dealing with latent fingerprint processing and recovery techniques, an emphasis will be placed on practical experience in evidence preparation and presentation.

### **Course Contents:**

- The development and recovery of a finger or palm mark at a crime scene.
- The identification of a crime scene mark against a fingerprint record.
- The principles of statement writing and maintaining the continuity of evidence.
- Preparation of marked-up photographic enlargements for court.
- Preparation and presentation of statements of evidence.
- Experience of a simulated court.



## **9- Modern Techniques of Forensic Document Examination**

### **Course Aim:**

To give participants the recognised best practice skills required to examine various types of questioned documents and to be competent in delivering evidence.

### **Course Outline:**

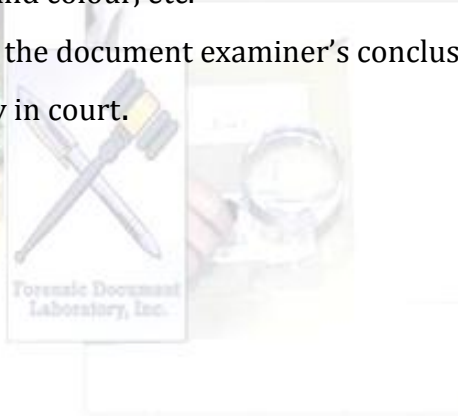
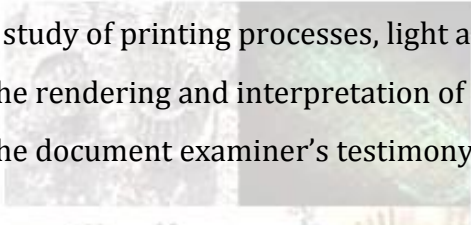
Participants will learn the fundamentals, theoretical principals and practical applications of a range of different techniques for advanced document examination as well as how to prepare court testimony. Sessions culminate with a talk by a UK Documents Laboratory manager on the practical aspects and use of instrumentation in the forensic document examination laboratory. The course is supported throughout by practical exercises to ensure a full understanding is established and participants are welcome to bring their own examples and case studies.

### **Course Contents:**

1. Theory and application of video spectral comparative analysis;
2. Indented writing visualization, preservation and analysis.



3. Introduction to Raman spectroscopic comparative analysis.
4. A study of printing processes, light and colour, etc.
5. The rendering and interpretation of the document examiner's conclusion.
6. The document examiner's testimony in court.





## **10- Anti-Money Laundering**

### **Course Aim:**

To provide the participants with a basic understanding of money laundering crime and its effects, legislation and practical implications and methods to counter and investigate offences.

### **Course Contents:**

- To understand what "Money laundering" is and the economic and social impacts from it
- To understand the international organizations and legislation for monitoring and compliance and roles of Banks and Financial Institutions and cooperation between Governments-Police-and their respective legislation
- Be aware of the methods of money laundering and banking transactions and of its use in terrorism/dugs/computer crime
- Be aware of investigation methods and skills required
- To examine money laundering and drugs / terrorism/ computer crimes.
- To be aware of signs and indications of possible laundering



## **11- Drugs and Toxicology**

### **Course aim:**

This training course will give the delegates a comprehensive knowledge of drug and toxicology forensic examination, detection and skills of writing professional reports.

### **Training course contents:**

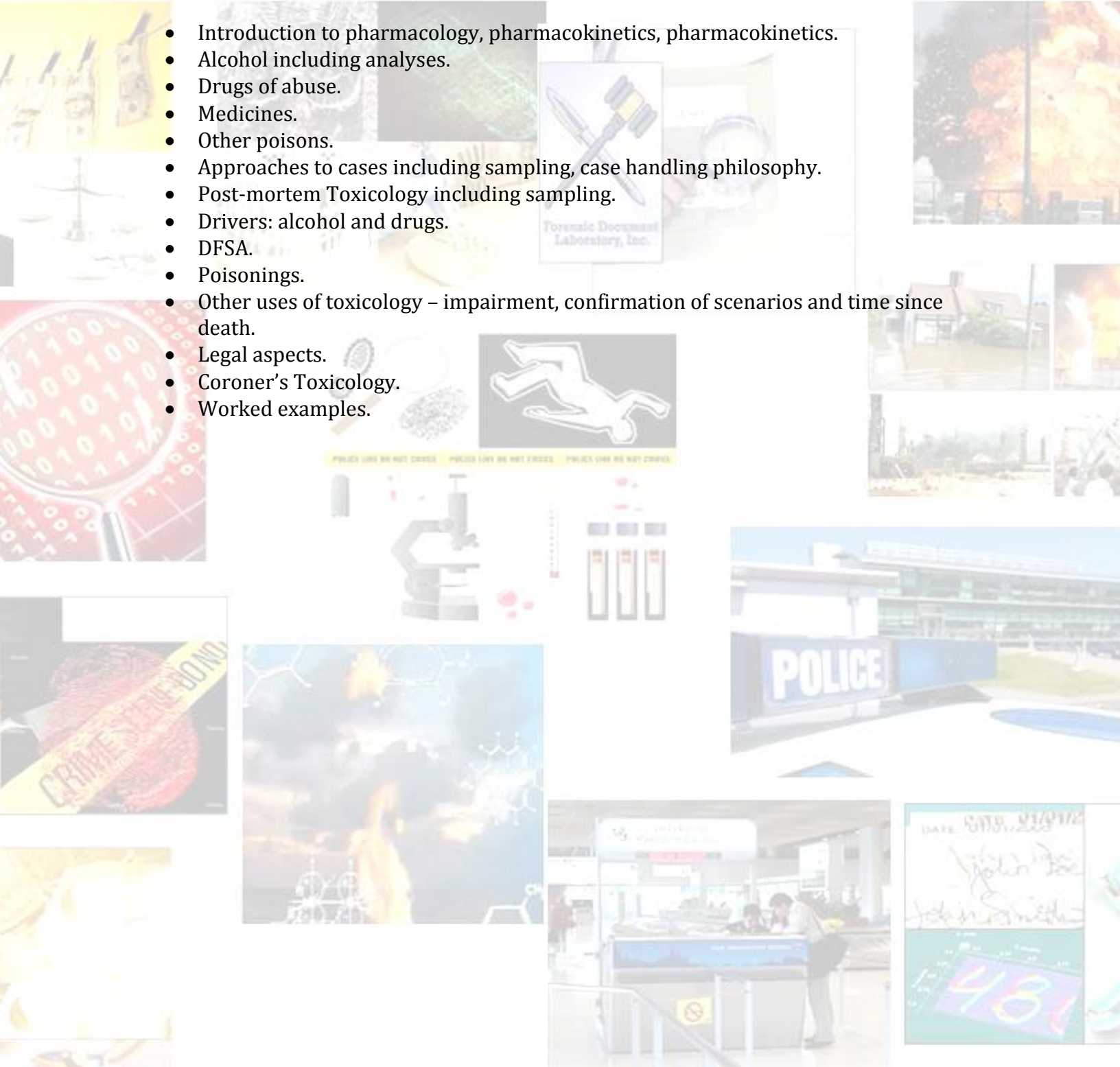
#### **I. Drugs**

- Methods of packaging
- Contamination and detection
- Cannabis, heroin, cocaine, amphetamines etc; manufacture, detection and analysis
- Physical evidence from packaging materials, manufacturing features, awareness of fingerprints, DNA
- Illicit laboratories and manufacturing methods
- Powders and tablets
- Presumptive testing
- Comparison of powders, tablets and plants
- Trace items
- Standard procedures
- Case studies
- Report writing



## II. Toxicology:

- Introduction to pharmacology, pharmacokinetics, pharmacokinetics.
- Alcohol including analyses.
- Drugs of abuse.
- Medicines.
- Other poisons.
- Approaches to cases including sampling, case handling philosophy.
- Post-mortem Toxicology including sampling.
- Drivers: alcohol and drugs.
- DFSA.
- Poisonings.
- Other uses of toxicology – impairment, confirmation of scenarios and time since death.
- Legal aspects.
- Coroner's Toxicology.
- Worked examples.





## 12- Fire Investigation

### Course Aim:

To provide the students with an appreciation of the scientific principles involved in fire investigation and the activities of the fire investigator. We will also aim to provide an insight into what can go wrong, what limitations exist and what myths still persist.

### Outcomes:

The students should be able to investigate fires with a range of complexity, be competent in scene recording techniques and evaluating the evidence

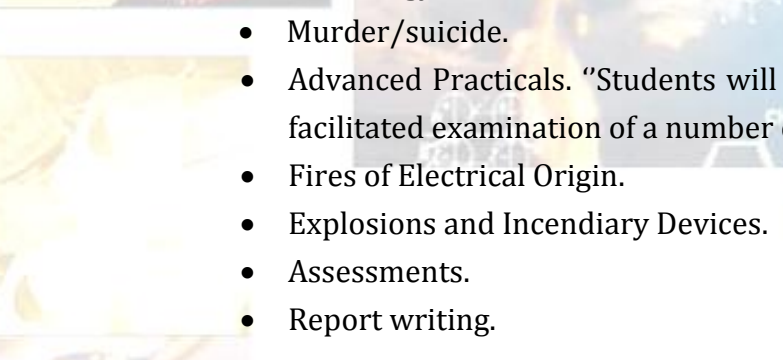
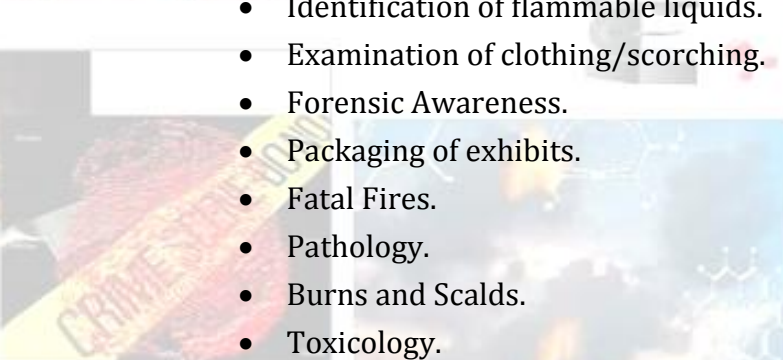
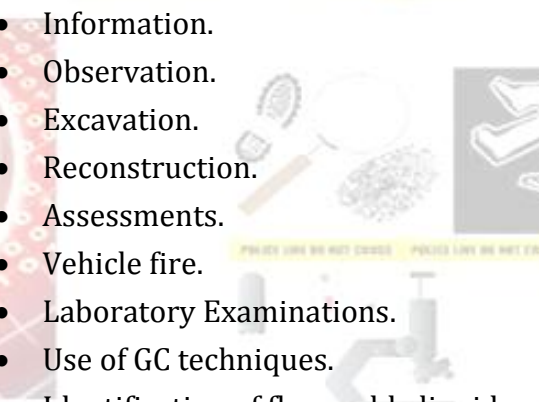
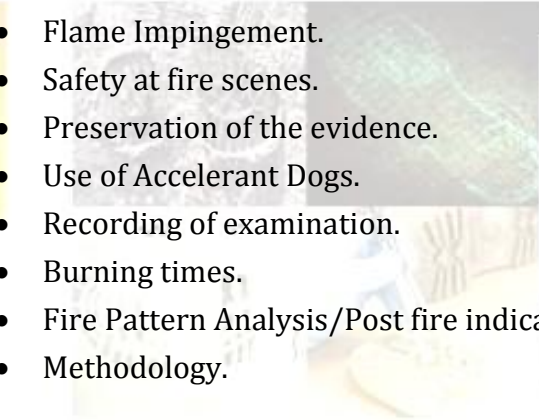
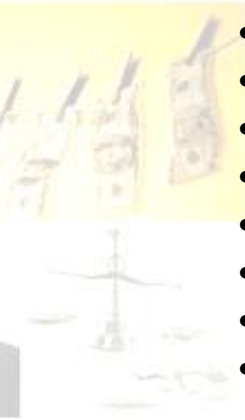
### Training Course Contents:

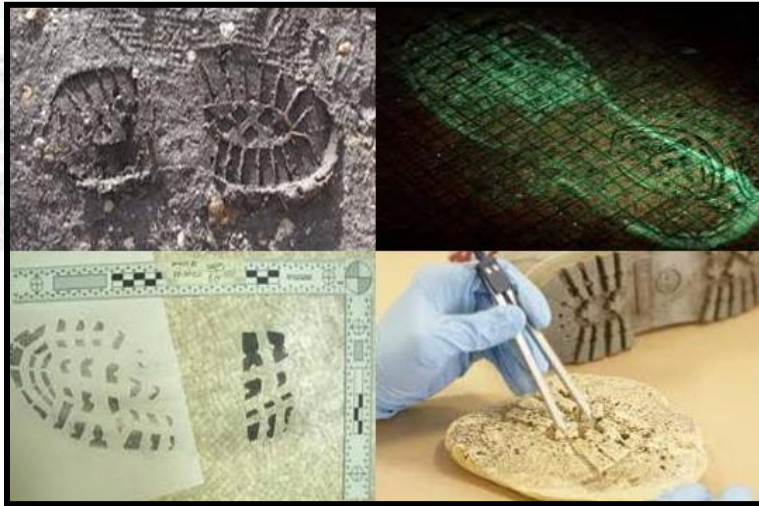
- Basic Fire Science.
- Combustion process/pyrolysis.
- Fire triangle.
- Flammability limits.
- Smouldering/flaming.
- Ignition Sources.
- Compartment/Open fires.
- Mechanisms of fire spread.
  
- Radiation.
- Convection.
- Conduction.





- Surface contact.
- Flame Impingement.
- Safety at fire scenes.
- Preservation of the evidence.
- Use of Accelerant Dogs.
- Recording of examination.
- Burning times.
- Fire Pattern Analysis/Post fire indications.
- Methodology.
- Information.
- Observation.
- Excavation.
- Reconstruction.
- Assessments.
- Vehicle fire.
- Laboratory Examinations.
- Use of GC techniques.
- Identification of flammable liquids.
- Examination of clothing/scorching.
- Forensic Awareness.
- Packaging of exhibits.
- Fatal Fires.
- Pathology.
- Burns and Scalds.
- Toxicology.
- Murder/suicide.
- Advanced Practicals. "Students will attend a specialist fire ground to take part in a facilitated examination of a number of real fires scenes".
- Fires of Electrical Origin.
- Explosions and Incendiary Devices.
- Assessments.
- Report writing.





## 13-Footwear Marks

### Course aim:

To provide training in footwear mark examination and comparison with suspect footwear. By the end of the course the student should be able to demonstrate that they can perform comparisons between marks from scenes with suspect footwear, selecting the most appropriate method, to the required standard and to make provisional assessments of the significance of the evidence.

### Course contents:

1. The use of footwear evidence
2. Types of mark and recovery techniques
3. Enhancement techniques (dusting, lifting, chemical treatments)
4. Photographic techniques
5. Footwear types
6. Preservation of contact trace evidence
7. Preparation of test marks
8. Comparison of shoes with marks
9. Note taking and recording evidence
10. Awareness of associated examinations (e.g. feet in shoes)
11. Evidential Assessments (use of databases)



## 14-Forensic Explosion Investigation

### Course Aim:

To provide the students with an appreciation of the scientific principles involved in explosion investigation, an appreciation of the types of explosion which may be encountered and the role of the investigator. We will also provide an insight into scene management and analytical techniques.

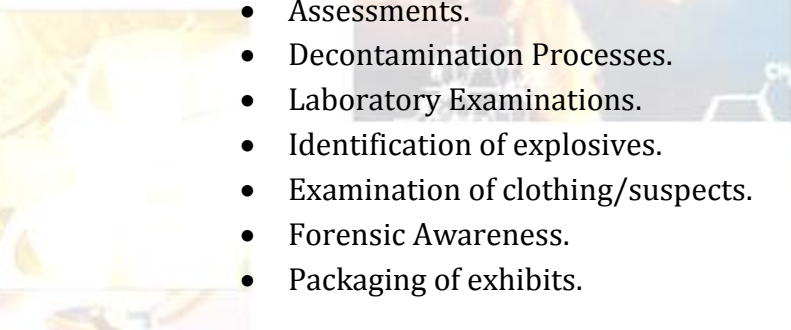
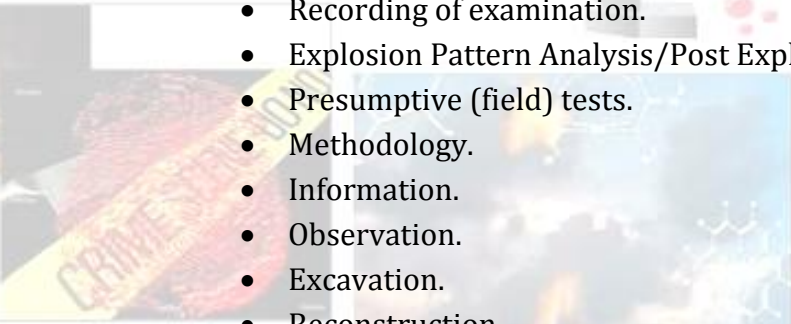
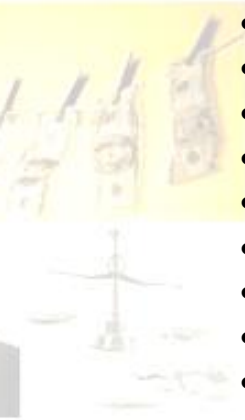
### Course Contents:

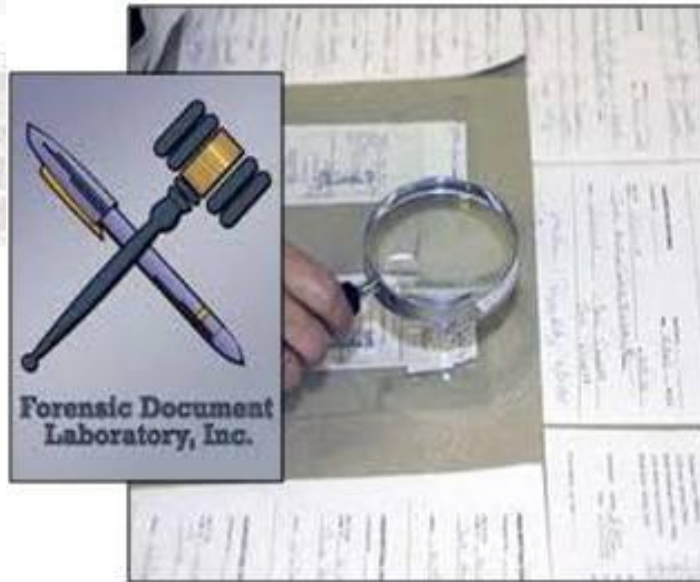
- Basic Explosion Science.
- Combustion process/pyrolysis.
- Fire triangle.
- Flammability limits.
- Explosive Limits.
- Definitions.
- Ignition Sources.
- Types of Explosion.
- Mechanical.
- Chemical.
- Nuclear.
- Deflagrating explosions.
- Detonated explosions.
- Effects of Overpressure.





- Broken glass diagnostic.
- Thermochemistry of Explosives.
- Kinetics of Explosive Reactions.
- Dispersed Phase Explosions.
- Vapours, dusts.
- Improvised Incendiary Devices.
- Timing devices.
- Petrol bombs.
- Pyrotechnics.
- Fireworks.
- Detonating Explosions.
- High order/low order.
- Primary & Secondary explosive trains.
- Commercial Explosives.
- Military Explosives.
- Improvised Devices.
- Safety at explosion scenes.
- Role of EOD/bomb disposal.
- Preservation of the evidence.
- Scene Management.
- Recording of examination.
- Explosion Pattern Analysis/Post Explosion indications.
- Presumptive (field) tests.
- Methodology.
- Information.
- Observation.
- Excavation.
- Reconstruction.
- Assessments.
- Decontamination Processes.
- Laboratory Examinations.
- Identification of explosives.
- Examination of clothing/suspects.
- Forensic Awareness.
- Packaging of exhibits.





## 15-Questioned Documents Forensic Examination

### Course Outline:

The course will give a comprehensive introduction to forensic handwriting and signature analysis. Delivery will be by lectures with an emphasis on practical work with the students examining pre prepared trail material.

### Course contents:

- Note taking.
- Principles of handwriting examination.
- The importance of obtaining suitable specimens.
- Consideration of natural variation in handwriting.
- Disguised handwriting.
- Limitations to handwriting comparisons.
- National features in writing examination.



- Principles of signature examinations.
- Effect of health/age on signatures.
- Simulation of signatures.
- Signatures on composite documents.
- Expressing strengths of conclusions.
- Statement writing.
- Giving evidence.
- Alterations or additions to text – ink examination.
- ESDA examination for impressions of handwriting.
- Examination of photocopied documents.
- Typscript Examination.
- Examination of printing processes.
- Examination of stamp marks.

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## Contacts:

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