



**FORENSIC  
TRAINING COURSES  
YEAR 2019**

**F**orensic  
**O**rganization  
**R**esearch  
**E**xpertise  
**N**ormalisation  
**S**ciences  
**I**ntelligence (legal intelligence)  
**C**riminalistics

**Thierry LEZEAU – Company Director**

# PROPOSED TRAINING COURSES

## I - PREAMBLE :

Every proposed information or training forms part of a level evaluation and educational objective framework. The proposed levels are codified according to the current rules in most of institutes, schools, training centres, and reflect required levels of skills.

It is noted four levels : **Sensitization** **Application** **Mastery** **Expertise** : **S-A-M-E** .

We will find one or several concerned level(s) associated with every chapter of training.

Some of these proposed themes can benefit from one or several lecturer(s), specialist(s) or expert(s), according to the educational objective required. Approved by Forensic Consulting France Company, these experts are recognized and assessed in their field, and comply with previously jointly established specifications. Some of them are registered on Court of Appeal lists in the national territory, others are registered in Europe.

The company has a list of lecturers, specialists or experts for each sector of activities, who are recognized and available to carry out and participate in training courses. Thus, they can be carried out by one or several actors, they can include theory only, or can be associated with a practical part, as well as demonstration, exercises, application of specific techniques or materials in classrooms or outside.

All the training courses are established, checked and assessed through an educational « package », including (cf annexes) :

- The client's order,
- The jointly established specifications,
- The lecturer's curriculum vitae,
- A list of his writings, publications, bibliography,
- A sheet about the selected training's educational objective,
- An overall plan,
- An educational sheet presenting the necessary educational means, the material conditions of implementation, the necessary places and technical means,
- The detailed course outlines with timing divisions, a course material (slides, powerpoint, videos...)
- The paper-based or USB key-based documentation, in direct relation with the course content, which can be given to the concerned audience, and an assessment form of the proposed training.

# SUMMARY

## **II – THEORETICAL TRAINING COURSES**

### **2.1 - Forensic**

*History, great principles, training courses, articulation...*

### **2.2 - Fingerprints, palmprints and diverse traces**

*The '12 points theory' and its relativism, expertises, files, ears, footsteps...*

### **2.3 - Forensic medicine and its applications**

*History, at-the-scene' body examination, anatomical pathology, toxicology, entomology, drownings, burns, morphological testing of blood traces, Bluestar T.M, life forensic medicine...*

### **2.4 - Ballistics**

*Findings, trajectography kit, lesional ballistics, analyses, examinations...*

### **2.5 - Human biology and its applications**

*Cell biology, genetic fingerprints, advances, future...*

### **2.6 - Microanalysis and its applications**

*Zonal taping, documents, counterfeit, tools traces, expertises...*

### **2.7 - Forensic photography and digital video**

*Macrophotography, light, specific UV photos, light, luminescence, fluorescence...*

### **2.8 - Fires and their applications**

*Canine services' interests, interaction with firefighting services...*

### **2.9 - The crime scene and its applications**

*G.M.S.I, coordination, standards and protocols, underwater findings, canine services' interests, materials and equipment, procedures, management of emergency services and first responders...*

### **2.10 - Vehicles and accidentology**

*Numerisation, reconstitution of accidentology phenomenons, H.E.V concepts, expertises...*

### **2.11- Forensic analyses and expertises**

*Standardized readings of expertises, new technologies related to forensics, new frameworks of interpretation, the good questions to ask to the expert...*

### **2.12 – Forensics related to the maritime world**

*Underwater forensics, specific findings on ships, expert approach of particular phenomenons related to the maritime world...*

### **2.13 - New technologies**

Data protection - telephony - Cybersecurity - Images and networks - Risk analysis

## 2.14 - Criminal analysis

Criminal analysis of a complex file - The relationship - The event - The connections

## 2.15 - Other

*Safety and security officers, the French judicial system, sectarian aberrations, suicide, the police custody...*

## **III – PRACTICAL TRAINING**

3.1 – Modern Management of the infraction scene

3.2 – Ballistics

3.3 – Forensic photography

3.4 – The underwater infraction scene

3.5 – At the scene' body examination and the amphibious body bag

3.6 – Papillary fingerprints' revelation and photography

3.7 – Washed blood stains' revelation and photography

3.8 – Using of crimelites and photography

3.9 – Accidentology with 3D scanner's implementation

3.10 - Training related to the specific sampling technique (Zonal Taping)

3.11 - Mouldings

3.12 – DNA samples (FTA Kit) for terms and conditions of human identification

## **IV – F.C.F ABROAD**

4.1 – Training Abroad

4.2 – Training to the preliminary analysis, to a QMS (Quality Management System) for laboratories and technical platforms related to forensics.

4.3 – Training on the various human identification systems (full biometrics, record of fingerprints, photographs, etc.....)

4.4 – Training to intervene on an infraction scene (GMSI), simple or complex one (Attack scenes, scenes related to a natural disaster, an important maritime, air, road or train crash, with a plurality of victims, problem of identifications and samples, for disputes' purpose, study trips, etc...)

4.5 – Study trips abroad

## **V – MATERIALS AND TRAINING**

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## II – SKILLS TRAINING

### 2.1 – Forensics :

History of Forensics - History of infraction scene's management -Forensics' training in Europe and France - Articulation of Technical and Forensic Police in France and Europe - The great principles of forensics - The forensic thinking

### 2.2 – Finger prints, palm prints and diverse traces :

Fingerprints - Palm prints - Specific traces



**2.3 – Forensic medicine and its applications :**

Forensic medicine - At the scene' body examination - The anatomic pathology – Toxicology - Entomology and aquatic fauna - Drownings - Flora and surroundings - Burns - Blood traces' morpho-analysis - Forensic imaging - T.M Bluestar and its derivatives - Composite drawings - Violence against children - Public-health issues - Victims of disasters' identification - Anthropology – Thanatology – Odontology - Forensic archaeology - Sexual-based violence - Forensic medicine for the living



**2.4 – Ballistics :**

Ballistics - Lesion ballistics - Ballistic samples, analyses and expertises :



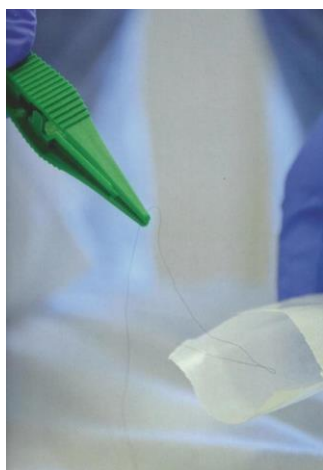
## 2.5 – Human biology and its applications :

### Cell biology - Genetic fingerprints



## 2.6 – Microanalysis and its applications :

### Microanalysis - The documents - The counterfeits - Traces and their applications :



## **2.7 – Forensic photography and digital video :**

The light and its applications in forensics - Forensic photography and digital video - Replacing in situation, reconstitution, photo animation - digital vidéo :



## **2.8 – Fires and their applications :**

Fires - Explosion scenes





## 2.9 – The infraction scene and its applications :

The modern management of the infraction - Standards and protocols related to forensics - The first responders on the infraction scene, emergency and rescue services, fire department, ambulance services - Forensic services' technical platform - Canine Using in forensics - The management of the infraction scene in contaminated area - Crime scenes' expériences - Seizures in Forensic Police Services - Coordination related to forensics - Notions of S.S.T-P.E – A.S.Q – H.S.I.E - Forensic Police Services' vehicles - Plans and sketches - Forensic documentation - Forensic Police Services materials and equipment - Findings and Surveys for the environment's protection :



Moulding techniques - Techniques of fibers and hair elements' sampling - Effraction marks - Zone grids and review – sweep and excavations - Forensic intelligence and its applications - History of the infraction scene management - The quality approach related to the infraction scene management - Forensic engineering - Infraction scene's lifting operations



## 2.10 – Vehicles and accidentology :

Accidentology - The chemical revelation of identification numbers - The vehicles :



## 2.11 – Analyses and expertises related to forensics :

Analyses related to forensics - New technologies - Expertises



## 2.12 – Forensics related to the maritime world :

Infraction scene's modern management - Findings and intervention at sea - Law of the sea – Conventions - Difficulties of findings at sea - Shipwrecks – boardings - Aboard ships' fires and explosions - Maritime piracy and findings - Discoveries of corpses at sea - At the scene' body examination in an aquatic environment - Underwater infraction scene - Maritime drug trade and findings



## 2.13 - New technologies

Data protection - telephony - Cyber security - Images and networks - Risk analysis - Training conducted by an expert engineer in cyber security

## 2.14 - Criminal Analysis

Criminal analysis of a complex file - The relationship - The event - The connections - Training conducted by an expert international criminal analyst.

## 2.15 - Diverse :

Safety agents, public or private security agents – Forensics - Instructors' training - Implementation of a certification, accreditation procedure - Command related to forensics - Suicide and its judicial treatment - French judicial organization - Sectarian aberrations - Study of specific cases, criminal records



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## III – PRACTICAL TRAINING

Theoretical training courses which are exposed on the site FORENSIC CONSULTING FRANCE may be all nearly subject to implementations of specific materials and equipment, as a complement to practical training with demos. Everything on site or in a dedicated location.

For some materials, the demo can be exposed on video.

Themed days that we organize are extremely formative, and combine the pleasant and the useful.

Valorisation of theoretical training courses through practical and interactive exercises implemented together with the instructing participant

For all these training courses, the company has got power point presentations, and diverse materials and equipment. The company also has a full up to date documentation, answering French, European and global standards. This documentation contains several thousand of explanatory photographs, arranged in folders and themes. The requirements specification has to be defined upstream, as well as requirements and expectations from the audience concerned by these training courses, and the full « package » will be established according to these elements.

Our company is able to implement the whole material required for an infraction scene's management, as well as a 3D scanner, a Freestyle 3D scanner, a drone, a geo-radar, a laser ballistic kit, crimelites, bluemaxx etc...

Visits on sites are also possible, according to the thematic selected

### 3 – Thematic days :

#### 3.1 – Modern management of the infraction scene :

##### Morning : Theoretical part

Approach of the infraction scene – Inclusion – Observation - Standards and protocols – European standards 17020 (investigations) – Methodology's general principles – Materials and equipment – Samples – Findings – Plans and sketches – Principle of freezing the site – Security perimeter – Criminal visualisation – Baptism – Progression - Traces and indices' management - Conservations – Documents to complete – Computer management of the scene's aggregate data (VICAP – etc.....)

##### Afternoon - Practical part :

Assembly of a standardized barnum with "clean and dirty" zones – Implementation of a crime scene, with mannequin and indices – The participants dress up standardized protection equipment, then they make the scene's investigations while using the material made available to them.

Using of progression plates, and special revelation lights.

Demonstration of the using of a drone on a scene.

### 3.2 – Ballistics :

#### Morning : Theoretical part :

History – Definitions and principles - Presentation of firearms and ammunition legislation, as well as classification - Findings' methodologies – Presentation of the trajectography kit and the laser – Implementation and applications – Presentation of indicative statements sheets on infraction scenes related to ballistics - Samples, research and identification techniques – Canine interests - Presentation of specific cases – European approach of shooting residues' management – Interests of 3 D scanner related to the infraction scene linked to Ballistics,

#### Afternoon : Practical part :

The participants join together on a licensed shooting range, supervised by launch monitors. During the session, the participants shoot with handguns and long guns, having various calibres, which allow them to understand mechanism, kinetics, the distance, the pressure on the trigger, noise, etc... Everyone goes back with his beam and his attestation.



### 3.3 – Judicial photography :

#### Morning : Theoretical part :

A professional photographer exposes the essential bases of photography, with the specificity of digital : the different types of boxes with definitions, light, speed, sensibility, diaphragm, shutters, the different objectives (fixed focal length), flash and its modes of using, definition of the pixel, size of picture, rendition of digital technology...

History of judicial photo and recommendations to photography an infraction scene, forensic acts, standards and protocols, quality approach, captioned photographic file, archiving and storage of pictures, specific cases, illustrations

#### Practical Part :

Handling of the device and its accessories, understanding his camera, which settings and modes to choose : manual, speed priority mode, aperture priority mode, automatic mode...

Practical exercises and manipulation : remote flash, tripod, monopod...

Practical exercises with different types of lighting (Under UV, fluorescence and luminescence), using and implementation of colorimetric and centimetric tests, photographies in ambient situations, macrophotography...

Practical shooting workshops with placement in situation of a body lifting operation, presence of the forensic doctor.



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### 3.4 – Underwater infraction scene :

#### Morning : Theoretical part

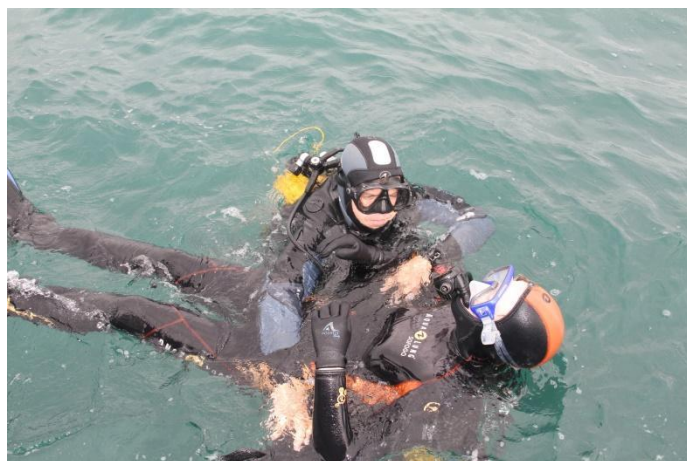
As part of an Infraction Scene's Modern Management, new standards and protocols absolutely have to be applied in all the infraction scenes, even when it's an underwater scene. Thus, the management of a scene at sea is much more complex to implement.

Explanation of the methodology to apply on an underwater infraction scene and of the specificity of the body's lifting operation.

#### Practical part :

Supervised by professional diving instructors, the participants dive until 10 metres depth for the beginners, and deeper according to the respective levels of everyone. The participants move on a reconstituted crime scene and put into practice what they saw in theory, in the morning.

The participants also attend a demo of the using of a novative body bag : the Amphibious Body Bag, created and manufactured by specialists of diving and forensics, as well as the company NAUTIRAID, at VAIGES (53).



### 3.5 – Implementation of the Amphibious Body Bag :

#### Morning : Theoretical part

The company Forensic Consulting France, partner in the development of the Amphibious Body Bag, especially during the “Forensic” phase, as well as during tests in real situation, offers a training to use this novative bag made by the NAUTIRAID company.

As part of an Infraction Scene’s Modern Management, new standards and protocols absolutely have to be applied in all the infraction scenes, even when it’s an underwater scene. Thus, the management of a scene at sea is much more complex to implement.

Explanation of the methodology to apply on an underwater infraction scene and of the specificity of the body’s lifting operation.

#### Practical part :

Supervised by professional diving instructors and professionals of underwater investigation, the participants dive on an infraction scene, reconstituted with indices. They participate to the findings, and they learn how to use the Amphibious Body Bag.

At the end of the ‘at-the-scene examination’, a demonstration of the cleaning protocol is not only necessary but compulsory, in order to reuse the Amphibious Body Bag.





### 3.6 – Revelation of fingers prints and the photography :

#### Morning : Theoretical part

History – Morphogenesis – Singleness and permanency of skin patterns - Classical revelation methods – Materials – Results – Simple exploitation - Comparison file – The 12 points theory and its relativism – Methods of chemical and physicochemical revelation – Analyses in laboratories – Analysis difficulties for some traces – Poroscopy – Colourings and products for the accentuation of low informing power traces – Fingerprints records – Specific cases of expertises – Specific studies.

#### Practical part :

Use of powders on various supports.  
Photography of the revealed trace  
Sampling of trace on the standardized support.  
Visualisation of traces thanks to crimelites  
Physicochemical revelation processes (SPR,.....)



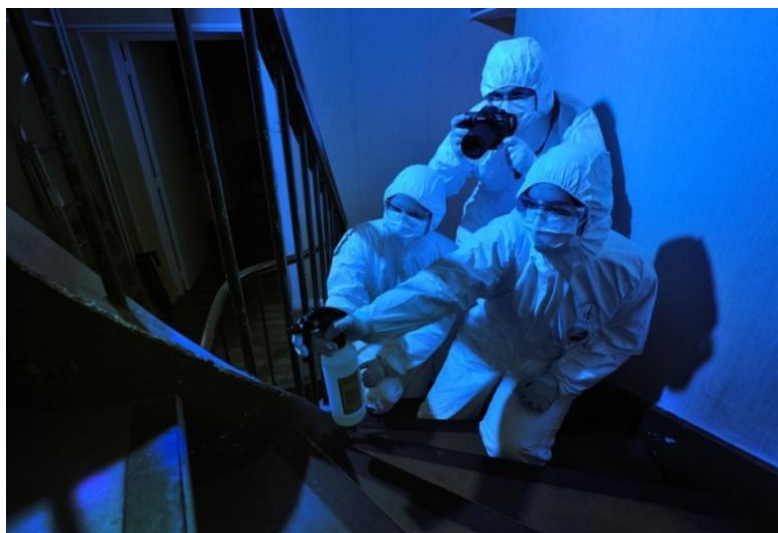
### 3.7 – Revelation of washed bloodstains and photography :

#### Morning : Theoretical part

General principles – Methodology of revelation – Findings – Samples - Protection measures – Informing powers – Analyses – Expertises – Specific cases - Materials and equipment – Shooting techniques – OBTI Tests – Intervention and implementation sheets - Standards and protocols.

#### Practical part :

After a demonstration, the participants work on an infractions scene, on which blood has been washed. After the chimiluminescence of the product applied, visualized by a typical blue glow, the participants make the specific photographic shootings, as well as the standardized biological sampling.



### 3.8 – Use of crimelites and photography :

#### Morning : Theoretical part

Luminescence – Fluorescence – White light – U-V – Materials and equipment – Principles – Definitions – Findings – The informing powers - The crimescope – Crimelites – The scenescope.

#### Practical part :

The participants use every crimelites and every bluemaxx with the adapted filters, with reference to a chart conceived by FCF, in order to poise traces invisible to the eye.

Photographies are made with the relevant filters (UV, luminescence and fluorescence).



### 3.9 – Accidentology with implementation of 3D scanner and drone :

#### Morning : Theoretical part

Nowadays, a traffic accident, simple or complex, requires a standardized approach with strict and precise protocols in terms of initial findings from the first responders, but also in its phase of later expertises.

Embarked technologies, more and more complex and present inside our vehicles, impose an expert view to facilitate the good understanding of various phenomena, which can be at the origin of the accident. The new technologies related to forensics (3D scanner - digitalisation) are very interesting tools which allow to approach the modelling and reconstitution of a complex accident. Likewise, confronting accidentology data with forensic data may be subject to joint expertises, whose conclusions can be relevant, for a better understanding of facts – Approach and inclusion of the phenomena Human Vehicle Environment (HVE)

A full day around this thematic, with recognized experts will allow to discuss and confront knowledges and practices related to accidentology.

#### Practical part :

Demonstration of 3D scanner's use and of Freestyle 3D scanner's.

Demonstration of drone's use on this type of scene. Brake track, tire scrubbing trace, trace of shock, etc...



### 3.10 – Training to the specific sampling technique (Zonal Taping) :

Morning : Theoretical part As part of modern management of the infraction scene, specific samples are sometimes necessary, especially in the field of MCA. Thanks to adhesive tape, you have to collect fibres from hair elements, particles, on a deceased or living victim, on a suspected person, in order to complete structures' identifications and comparisons. Process particularly used in Europe and which brings a significant complement in the whole management strategies.

Practical part : Thanks to the approved kit, the participants realize a specific implementation on a mannequin or a living person, of the zonal taping kit. Photos are made, as well as tips for packaging and sealing, for a later exploitation in laboratory



### 3.11 – Mouldings :

Morning : Theoretical part : Training on the various moulding techniques of diverse traces thanks to several processes (Gel – paste – plaster, etc..)

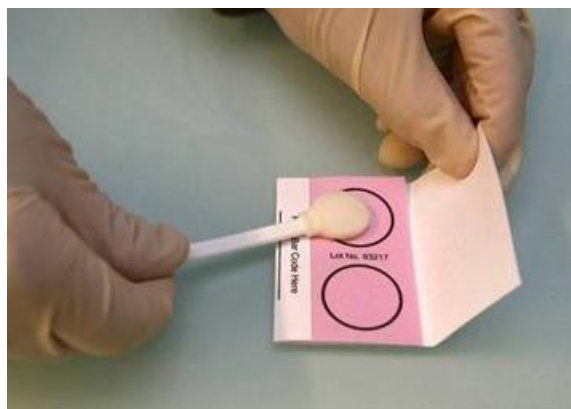
Practical part : The participants implement the moulding processes on various traces and supports. The results are photographed with the relevant technique.



### 3.12 – DNA samples (FTA Kit) for human identification modalities

Theoretical part : Approach of sampling conditions : Standards and protocols of the sampler agents' compulsory protections, implementation methods. Packaging and conservation of samples made. Notion of tracking and legal value. Presentation of sampling kits', results and interpretations. Presentations of constraints, risks in case of bad realization of samples and analyses.

Practical part : The participants implement sampling kits in the respect of standards and protocols : Dressing of the sampler agent, use of an operating field, completion of the sample in itself on a person, packaging and conservation. Document to establish upstream and downstream the sample, in order to assure the tracking. Taking of photographs



## VI – F.C.F ABROAD

### 4.1 – Training abroad

All the training sessions we propose in France are also workable abroad, in theory and practice. We are able to propose training courses adapted to the requesting country's needs. They cover the whole spectrum of forensic sciences. These training sessions are addressed to lawyers, magistrates, judicial experts, police officers, gendarmes, custom officials, soldiers, but also to private companies concerned by security issues.

One week programs allow to join theory and practice and to train on several levels, from technician to instructor.

FCF staff can travel with equipment and materials with international standards, for exercises' realization.



SENEGAL DAKAR 2015

### SPECIFIC INTERNATIONAL PROPOSITIONS

#### 4.2 – Training to preliminary study, to the SMQ's implementation (System Management Quality), for laboratories, technical platforms, in forensics :

Through its skills and its network, F.C.F company is able to implement a training session about the management quality system, in view of realizing 1st, 2d and 3rd levels technical platforms of laboratories, as an extension of what is done in Europe.

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Training of quality specialists, with the whole international applicable standards.

FCF can assure the continuous training of the staff concerned by the quality approach inside their structure and prepare them to the various procedures (Certification, accreditation.....)

Training of instructors in order to guarantee the continuity of knowledge transmission.

#### **4.3 – Training on the various human identification systems (Full biometrics, Biométrie complète, fingerprints record, photographies, etc.....) :**

For the countries which don't have any national records, especially in the field of fingerprints, we propose a pre-audit for implementing a device allowing to have an efficient work tool for fighting against crime and delinquency.

Training of technicians and operators for these data base and monitoring of the continuous training in this sector.



**Madagascar – Antsiranana 2015**

#### **4.4 – Training to the intervention on an infraction scene (Modern Management of an Infraction Scene), simple or complex (Attack scenes, plurality of catastrophe's victims, etc....) :**

Training adapted to various levels, for the first new responders, technicians and experts on the simple or complex Modern Management of an Infraction Scene.

Treatment of mass victims scenes : Accidentology, catastrophe, attack. Training responders' teams in accordance with international standards (Lifting and Interpol identification sheets Fiches...)

FCF staff can travel with equipment and materials with international standards for exercises' realization.

#### 4.5 – Study trips abroad :

FCF company offers study trips abroad, with learning objectives related to forensics. The goal is to approach the various judicial, criminological and forensic aspects of the different forms of delinquency and criminality, while studying answers that some countries try to bring.

These trips can be organized in various countries around the world. Through its network, FCF takes over the trip's pedagogical organization, with forensics as key medium.

More specifically, it is possible to realize these training sessions with universities, training centres, police and gendarmerie schools, courts, social actors, laboratories, hospitals, forensic sciences institutes, and forensics centre.



Université du Québec  
à Trois-Rivières

#### Study tour in Canada - June 2015 and July 2017



LABORATOIRE  
DE SCIENCES JUDICIAIRES  
ET DE MÉDECINE LÉGALE

*La science au service de la justice*



Other projects are considered in Luxembourg, Italy and in the USA.

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## V – LE MATERIEL ET LES FORMATIONS

FORENSIC CONSULTING FRANCE, based upon the training sessions we provide, is able to bring, in partnership with business partner companies, every specific material and equipment required, such as :

- The equipment necessary to the Forensic Services, covering the whole range of forensic science.
- Materials for technical platforms and laboratories.

FORENSIC CONSULTING FRANCE uses these materials and equipment during training sessions, which allows to better understand using techniques.

FORENSIC CONSULTING FRANCE develops, distributes and promotes its training offer and services worldwide.

Materials and equipment are visible on our website : [www.forensic-france.com](http://www.forensic-france.com)

**Thierry LEZEAU**  
**Spécialiste en criminalistique**  
**Forensic Consulting France**  
**Directeur de la société**

