ADVANCED SEQUENTIAL PROCESSING - A HANDS-ON WORKSHOP

COURSE DESCRIPTION

The purpose of this four-day workshop is to empower the student through realistic practical exercises to:
* Understand the initial role of the crime scene and evidence technician in signal recognition
* Recognize the series of critical steps that detect and optimize evidence in the journey from scene to stand
* Receive, document and maintain the integrity of physical evidence while retaining it in possession for fingerprint examination
* Stay vigilant for, seize and protect other evidence that falls outside the fingerprint discipline
* Diagnose and triage the nature and composition of compound exhibits
* Be familiar with the nature, application, target and mechanism of proven fingerprint detection methods currently in use
* Select the sequence of processes that will afford the maximum extraction of evidence, of all kind on compound exhibits encountered during the investigation of a crime
* Apply these processes skillfully and in the correct order to achieve maximum evidence extraction
* Photograph impression evidence using atypical techniques, recording all the detail present
* Deliver knowledgeable effective testimony in court as to the continuity of the evidence, explain the mechanisms and limitations of the techniques employed and explain the decisions that led to the processes used to obtain evidence.

The students will be formed in two-person teams. Each will receive his/her own compound exhibits on Day 1, but will work as partners to confer and decide on strategy. Together, each team will select the appropriate sequence of actions, process the exhibits accordingly (Day 2), record their findings with a DSLR camera (Day 3) and be prepared to tender evidence in mock court on the final day, as to their actions and the chemistry and physics behind the procedures they have followed.

TARGET AUDIENCE

All professionals who process crime scenes and/or exhibits for fingerprints, footwear impressions and other forms of physical evidence, encounter complex or compound exhibits, and strive to leave nothing behind.

All professionals who wish to learn to triage compound exhibits, select the appropriate number and order of examination procedures for any given piece of evidence that will afford the best likelihood for recovery of all latent evidence.

All professionals who seek a deeper understanding of the mechanisms and range of the dominant fingerprint detection methods.

All forensic photographers who record impression evidence in preparation for comparison and/or AFIS search, and seek the tools to solve challenging recording situations that fall outside conventional photography.

All professionals who seek a realistic holistic training experience that comprises all facets of evidence assessment, protection, detection, recording, documenting and presenting, from crime scene to courtroom.

SHOULD BE ABLE TO PERFORM

The student will learn how to evaluate each piece of evidence, in many cases composed of several individual components, to record the condition of, to dismantle said pieces of evidence, to treat each component in such a way as to maximize the chances for evidence extraction without loss.

The student will learn how to record fingerprints and shoe impressions that present challenges beyond routine photography, to employ such techniques as image subtraction, coaxial lighting, tent lighting, narrow band filtration, focus stacking and high dynamic range merge.

The student will learn how to tender evidence in court as to their actions, but above all, their professional strategic decisions as to technique selection and order.

MUST BRING TO CLASS

* Lab coat or other personal protection clothing
* Suitable footwear for lab exercises (no open-toed shoes)
* Digital Single-lens Reflex Camera with a macro lens and tripod strongly suggested. It is expected that every student will be able to comply with this recommendation, and every attempt will be made to pair attendees without cameras with those who bring them. It will also be advantageous to have an orange barrier filter, compatible with the lens, for fluorescence photography.
* A laptop computer, loaded with any version of Photoshop (the later the better) will assist the student in viewing and digitally optimizing the evidence they have developed and photographed.
DAILY SCHEDULE

WHAT'S NEXT
This course allows the students to use professional judgement in the selection and application of detection procedures introduced in Finding Latent Evidence and Light, in as authentic an operational training experience as possible. The skills and decision process learned herein will prepare the student for Forensic Latent Print Examiners: Extend Your Reach.

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I.A.I. APPROVED TRAINING HOURS
This course provides 32 training hours and is approved for IAI Certification and re-certification.

SCENARIO & SEQUENTIAL PROCESSING WORKSHOP—OUTLINE
See page 3

HOST A CLASS
See page 4
Day 1 - Morning
* Opening Remarks
* Issue of exhibits, formation of teams
* PPT – DNA connection
  * Case Objectives and Strategy
  * Signal recognition, scene to stand
  * Diagnosis & Triage
  * Fingerprint composition
  * Sequential strategy

Day 1—Afternoon
* PPT – Techniques review
  * Light
  * Porous
  * Nonporous
  * Blood impressions
  * Sticky side
* Discussion and Work Review

Day 2—Morning
* Preparation of Chemistry
* Exhibit Processing

Day 2—Afternoon
* Exhibit Processing (cont)
* Discussion and Review

Day 3—Morning
* PPT – Photographing impression evidence
* Photography of evidence developed (practical)

Day 3—Afternoon
* Continued
* Discussion and Review

Day 4—Morning
* PPT – Photoshop extensions
* Results review
* Mock trial

Day 4—Afternoon
* Mock trial
* Review
* Exam
* Exam review
* Certificates
HOST A CLASS

The following are the basic requirements for hosting this class but we will work to accommodate your situation.

Monday is the set-up day and is dedicated to checking that all chemistry, equipment and supplies have been received, resolving issues and ensuring that the hands-on rotations will run smoothly. The workshop is conducted in a lecture room and a lab with both being required for the 4 days. In addition, other rooms or areas are needed for mock crime scenes on day 1, and the practical photographic exercises on Friday morning. There are usually four stations set up in the lab with a group of 6 students at each station. Each group will spend slightly less than half a day at each station (two days, Wednesday and Thursday to complete the rotation.) Students will have the opportunity to mix and apply detection chemistry at each station.

The stations are:
* Cyanacrylate fuming and dyes
* Amino acid reagents
* Blood impression development
* Lipid and sticky-side processing

There will be lectures each day in the classroom which fill out the rest of the days. Friday will be devoted to hands-on photographic practical exercises, followed by the classroom review and discussion of the results.

Class room requirements:
* Table & chair seating for 24
* PowerPoint projector
* Whiteboard (if possible) or a flip chart
* 2 Breakout rooms (mock crime scenes, for Tuesday afternoon):
  - Approx. 10' x 10' (enough room to arrange a mannikin with exhibits on floor)
  - Sufficient room for 6 students to conduct light examination
  - Power source
  - Capable of making room dark for effective use of light sources

Lab requirements:
* Sufficient room for 24 students to work at four stations concurrently, including sufficient counter space for students to mix chemistry, process and lay out exhibits
* At least one fume hood, two would be better, three are ideal
* Standard lab health and safety features including eyewash station, nitrile gloves, emergency shower
* At least one large wet sink, two would be great, three are ideal
* Nitrile gloves for 24 attendees during lab rotations

Lab Equipment required:
* Approximately 12 beakers, size not critical but at least 500 ml capacity, 1L would be better
* 2 - 6, 250 ml beakers, whatever is available
* 4 graduated cylinders, 25, 50 or 100 ml capacity
* 6, 1 or 2 ml pipettes (disposable if possible)
* Magnetic mixers, at least 2, more would be fantastic
* At least 12 magnetic stir rods
* Glass trays of any size, as many as 6, if possible (ideal sizes - 6 x 9, 10 x 12)
* Humidity chamber, if possible. If not, one steam and one dry iron
* Cyanacrylate fuming chamber

It is helpful to know which light sources are available ahead of time.

Exclusive of the laboratory equipment, all chemistry and teaching equipment will be supplied by RS&A