



## RON SMITH & ASSOCIATES, INC.



### 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 kinds 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

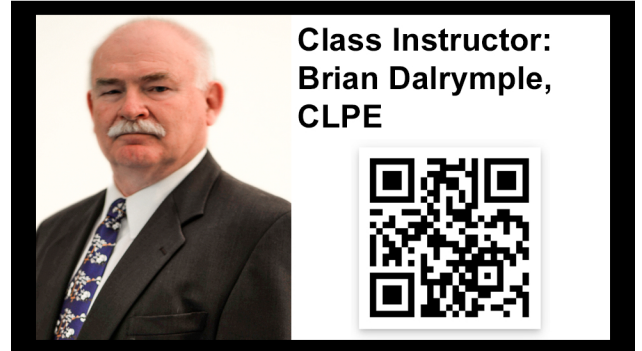
All professionals who process crime scenes and/or exhibits for fingerprints, footwear impressions and other forms of physical evidence, encounter complex or compound exhibits, and strive to leave nothing behind.

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.



**Class Instructor:**  
**Brian Dalrymple,**  
**CLPE**



## 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 finger 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 not 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

Hours	SETUP DAY	DAY 1 CLASSROOM	DAY 2 LAB	DAY 3 CLASSROOM	DAY 4 CLASSROOM
8:00 – 10:00	CREATION OF EXHIBIT SETS	ISSUE OF EXHIBITS  DNA STRATEGIES NOTES & CONTINUITY  CASE OBJECTIVES SIGNAL RECOGNITION  SCENE TO STAND	MIXING OF CHEMISTRY  GROUPS PROCESSING EXHIBITS	PHOTOGRAPHIC TECHNIQUES  LAB  IMPRESSION PHOTOGRAPHY	PHOTOSHOP EXTENSIONS  MOCK TRIAL
10:00 – 10:30 Break					
10:30 – 12:00	LAB CONFIGURATION	DIAGNOSIS & TRIAGE  FINGERPRINT COMPOSITION  SEQUENTIAL STRATEGY			
12:00 – 1:00 Lunch					
1:00 – 2:30		TECHNIQUES REVIEW  LIGHT EXAMINATION			REVIEW
2:30 – 3:00 Break					
3:00 – 4:00		PAPER, WOOD NONPOROUS BLOOD STICKY SIDE	QUESTIONS & REVIEW	QUESTIONS & REVIEW	EXAM  EXAM REVIEW  CERTIFICATES

### SUPPLIED BY RS&A

- A coil-bound comprehensive workshop manual for each student
- All dry chemistry
- All sample substrates and test exhibits for student use

### SUPPLIED BY HOST AGENCY

There are significant challenges in supplying and shipping liquid chemistry in sufficiently small quantities to suit these workshops, and once opened, the unused portions cannot then be shipped to another training venue. They are all items ordered and used by identification agencies in routine duties. We ask therefore that these solvents are supplied by the host agency.

- 2 L HFE 7100 (or available substitute)
- 1 L Ethanol
- 1 L Methanol
- 200 ml Ethyl Acetate
- 200 ml Glacial Acetic Acid
- 50 ml Formic Acid

# SCENARIO & SEQUENTIAL PROCESSING WORKSHOP—OUTLINE

## Day 1 - Morning

- \* Opening Remarks
- \* Issue of exhibits, formation of teams
- \* PPT – DNA connection
  - \* Case Objectives and Strategy
  - \* Signal recognition
  - \* Diagnosis & Tri
  - \* Fingerprint com
  - \* Sequential strat

## Day 1—Afternoon

- \* PPT – Techniques
  - \* Light
  - \* Porous
  - \* Nonporous
  - \* Blood impressic
  - \* Sticky side
- \* Discussion and Wo

## 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