2026 CBDIAI Educational Conference – Workshop Descriptions

A View From Above: A Look into the Crime Scene Unit's Drone Program at the Baltimore Police Department (2 hours) *Instructor: Megan Descalzi* Small unmanned aircraft systems (sUAS), more commonly known as drones, are increasingly being used in law enforcement and public safety as they can be deployed rapidly and in a variety of conditions. More specifically, they are utilized to document crime scenes through aerial photography, 2D mapping and 3D modeling. sUAS technology offers crime scene technicians a more efficient, cost-effective and safer alternative to documenting crime scenes, while simultaneously capturing images that present a true and accurate representation of the scene for investigators and for use in a court of law. This presentation will focus on how the drone program in the Crime Scene Unit at the Baltimore Police Department was implemented. The program structure and its compliance with FAA regulations will be discussed, as well as the current and future applications to casework. **Max Attendees: TBD**
Bloodstain Pattern Analysis: With concentration on trauma and wound correspondence (2 hours) *Instructors: Tiffany Edwards MS, Reese Miller, and Jacob Ciganik (BS- Forensic Examiner students WVU)* *Incorporating the preferred terminology and methodology of bloodstain pattern analysis and with concentration on the scene findings associated with such patterns. Present and draw attention to focus on the wounds and affiliated trauma upon the victim- in the event the deceased was not in the scene of the primary location of the bloodshed act. Reflect upon the steps and actions that a BPA expert would take in reviewing the crime scene documentation and associated analysis to complete the BPA report. Review various case studies that highlight the importance of proper scene documentation and used terminology.* *Hands on workshop will include road mapping exercise with area of convergence and area of origin.* *Students must bring a calculator (phone is fine) for this workshop. **Max Attendees: 16**
Crime Scene Reconstruction – The Use of Logic and Critical Thinking in Forensic Investigations (4 hours) *Instructor: Douglas Young*

Crime Scene Reconstruction is a comprehensive course designed to equip participants with the theoretical knowledge and practical skills necessary to reconstruct complex crime scenes accurately. The course delves into the interdisciplinary field of forensic science, integrating principles of crime scene investigation and analysis, critical thinking, logic, and other forensic disciplines such as bloodstain pattern analysis and shooting scene investigation. Through a combination of lectures, case studies, and hands-on exercises, participants will learn to apply scientific methods and analytical techniques to interpret physical evidence, data and information and crime scene artifacts in pursuit of determining what occurred during the case and in what order. Emphasis will be placed on understanding the significance of evidence in context and synthesizing multiple lines of evidence to construct a coherent narrative of the crime. Key topics covered include crime scene documentation, forensic photography, logic and critical thinking, bloodstain pattern analysis, shooting scene investigation, hypothesis development and principle of reconstruction. Participants will also explore the role of forensic experts in legal proceedings and ethical considerations in crime scene reconstruction. By the end of this course, participants will be better equipped with the skills to reconstruct crime scenes with precision, integrity, and attention to detail, contributing to the pursuit of justice and the resolution of complex criminal investigations. Attendees will learn how to defend their reconstructions in court and will work in groups to investigate a complex case that they will be required to reconstruct in class. **Max Attendees: 25**
Crime Scene Reconstruction – The Use of Logic and Critical Thinking in Forensic Investigations (4 hours) *Instructor: Douglas Young* Crime Scene Reconstruction is a comprehensive course designed to equip participants with the theoretical knowledge and practical skills necessary to reconstruct complex crime scenes accurately. The course delves into the interdisciplinary field of forensic science, integrating principles of crime scene investigation and analysis, critical thinking, logic, and other forensic disciplines such as bloodstain pattern analysis and shooting scene investigation. Through a combination of lectures, case studies, and hands-on exercises, participants will learn to apply scientific methods and analytical techniques to interpret physical evidence, data and information and crime scene artifacts in pursuit of determining what occurred during the case and in what order. Emphasis will be placed on understanding the significance of evidence in context and synthesizing multiple lines of evidence to construct a coherent narrative of the crime. Key topics covered include crime scene documentation, forensic photography, logic and critical thinking, bloodstain pattern analysis, shooting scene investigation, hypothesis development and principle of reconstruction. Participants will also explore the role of forensic experts in legal proceedings and ethical considerations in crime scene reconstruction.

By the end of this course, participants will be better equipped with the skills to reconstruct crime scenes with precision, integrity, and attention to detail, contributing to the pursuit of justice and the resolution of complex criminal investigations. Attendees will learn how to defend their reconstructions in court and will work in groups to investigate a complex case that they will be required to reconstruct in class.

Max Attendees: 25

Distortion and ACE-V (4 hours)
Instructor: Cameron Stauffer

This course will introduce the attendee to the scientific method currently followed in the Latent Print community, ACE-V (Analysis, Comparison, Evaluation, and Verification.) The intricacies of the Analysis stage will be broken down and particular attention to the levels of detail, ridge flow, pattern type, ridge counts, minutiae, and minutiae formations, ridgeoscopy and poroscopy will be covered. Types of impressions commonly found at crime scenes will be discussed as will the meanings of the terms "of value" and "no value." Discussions will also include the numerical system vs a holistic approach, as well as other topics currently being discussed in the field. Instruction will also be focused on distortion and the how, what, why and when, behind an impression appearing as it does. The course will culminate in hands on activities creating distortion firsthand. Examination will follow instruction and hands on activities.

Full Course Outline:

- ACE-V (focusing on analysis stage): levels of detail, ridge flow, pattern types, ridge counts, minutiae, minutiae formations**.** Of value/no value class discussion as well as ridge count, pattern type interpretation on screen class exercises and discussion. **(1 hour)**
- Distortion (how it is formed, why it is formed, PowerPoint examples) (substrate distortion, deposition pressure distortion, lateral pressure distortion, matrix distortion, livescan distortion, etc). Class discussion (on screen exercises) on distortion observations. **(1 hour)**
- Comparison, Evaluation, Verification (Discussion on how comparison step occurs, looking for similarities and/or differences, current conclusion scale able to be reached as well as discussion into the new proposed conclusion scale, importance of verification and different types of verification in the field today (blind, double blind, etc). **(45 min)**
- Hands on Exercises (creating different distortions using a multitude of mediums/substrates/matrixes) **(45 min)**

Graded exam/test (30 min) (must gain grade of 80% or higher to receive certificate*)*

Evaluation for passing workshop: A graded exam will be provided to attendees at the end of the course. Each attendee must receive a passing grade of 80% or higher to receive certificate.

Max Attendees: 25

Do you see what I see? Reaching consensus on manual comparison quality of latent prints in casework (4 hours)
Instructor: Heidi Eldridge

Research has shown latent print examiners often reach different suitability determinations. But how to reduce this variability? Automated tools do well with extremes but may not resolve the "gray area" prints or reflect the quality needed for manual comparisons. We developed a free consensus-building tool to determine Manual Comparison Quality (MCQ) for latent prints. In this workshop, we discuss the tool's development, then use it to determine MCQ and see how well we reach consensus.

*Students must bring a laptop with Firefox or Chrome pre-installed for this workshop.

Max Attendees: 25

Forensic Entomology & The Crime Scene – A Hands On Perspective (4 hours)
Instructor: Douglas Young

Course Objectives:

- Define forensic entomology and explain its role in criminal investigations
- Identify the stages of insect colonization on human remains
- Explain how insect development aids in estimating post-mortem interval (PMI) Document, collect, and preserve entomological evidence at crime scenes and autopsies
- Recognize environmental, geographic, and biological factors influencing insect activity
- Apply entomological evidence to real case examples in a scientifically defensible manner

Course Overview:
Forensic Entomology and the Crime Scene is a specialized workshop designed to demonstrate how insects provide vital evidence in death investigations. While often overlooked or discarded, insect activity on human remains can reveal critical details about the post-mortem interval, movement of the body, and even toxicological findings when other tissues are no longer available.
Participants will explore the fundamentals of insect biology, the predictable succession of insect colonization on remains, and the methods used to accurately collect, preserve, and interpret entomological evidence. Emphasis will be placed on proper crime scene and autopsy protocols, documentation practices, and the scientific principles that make this discipline reliable and defensible in court.
Through a combination of lecture, case studies, and hands-on exercises, attendees will gain the knowledge and skills to recognize the value of insect evidence, apply

entomological data to investigative timelines, and strengthen the overall integrity of forensic investigations.

Course Outline:

Introduction:

- Definition of forensic entomology (Robert Hall's definition).
- Medico-legal applications: violent crimes, poisoning, traffic deaths, criminal misuse of insects.
- History: Sung Tz'u (1235 AD), Francesco Redi, landmark texts.

Insect Biology & Succession:

Basic Entomology

- Arthropods vs. insects vs. arachnids.
- Metamorphosis: egg → larva → pupa → adult.
- Environmental influences (temperature, humidity, geography).

Succession and PMI

- Blow flies and beetles as primary forensic insects.
- Succession analogy: "innings of the game."
- Case review: PMI determination from insect stages.

Hands-On Activity: Examine insect life cycle charts and practice estimating PMI.

Crime Scene & Autopsy Protocols

Crime Scene Documentation

- Photography, note taking, sketching, video, death scene checklist.

Collection Procedures

- Climatological data (ambient, soil, body, maggot mass temperatures)
- Specimen collection: eggs, larvae, pupae, adults.
- Packaging, labeling, "maggot motels."
- Autopsy considerations (cooler storage, clothing, vehicle cases).

Case Applications &Live Larvae Examination

- Applied Forensic Entomology
- Entomotoxicology (drug detection in larvae)
- Case studies (e.g., carbon monoxide case)
- Other influences: scavengers, freezing, artifacts from insect activity

Max Attendees: 25

Forensic Examination of Violent Crime Scenes: A Case Studies Presentation (2 hours)

Instructor: Douglas Young

Course Description

This interactive course immerses participants in the analysis of adjudicated violent crime scenes, challenging them to apply their forensic knowledge, logic, and critical thinking skills. Through detailed case studies involving homicides, assaults, and other acts of violence, students will work collaboratively to address structured questions posed by the presenter. This format moves beyond passive learning and actively engages participants in the investigative process.

Central to the course is the practice of making thorough, complete observations and applying a solid descriptive framework to support them. Careful description and objective recording establish the foundation for credible analysis, ensuring that evidence is assessed without assumption or bias. Building on this foundation, the course emphasizes the application of a sound methodology to answer investigative questions and interpret evidence, with particular attention to the role of crime scene reconstruction in violent crime investigations. By systematically breaking down events into their component parts, participants will learn how individual pieces of data and evidence interconnect to form a coherent and defensible narrative of the crime.
By the conclusion of the course, attendees will have developed a deeper understanding of how to approach violent crime scenes with rigor, objectivity, and defensible reasoning. They will practice integrating the totality of information—from physical evidence to contextual details—into coherent conclusions. The experience gained in this course is designed to strengthen participants' ability to reconstruct violent events, ultimately enhancing their effectiveness in investigating crime scenes and supporting sound outcomes in the justice system.

Max Attendees: 25

Forensic Leadership Essentials: Practical Tools for Supervisors and Team Leads (4 hours)
Instructor: Michael Kessler

This hands-on, interactive workshop equips current and aspiring forensic supervisors with essential tools for leading high-performing teams while navigating the unique challenges of the "working supervisor" role. Participants will explore time management, team dynamics, conflict resolution, difficult conversations, and policy-based decision-making through realistic scenarios and practical group exercises. The session emphasizes applied leadership skills grounded in organizational policy, ethical standards, and professional credibility. Attendees will leave with actionable strategies and tools to apply immediately in their leadership journey. This workshop is being submitted for IAI continuing education approval.

Max Attendees: TBD

Introduction to Facial Examination (4 hours)
Instructor: Steven Johnson, Ideal Innovations, Inc.

Facial Recognition (FR) is one of the most controversial biometric and forensic disciplines in
use around the world today. Much of this controversy is based on old research, misinformation and improper utilization of the technology and supporting services. The key to improving the
use and effectiveness of FR systems is ensuring that experienced and well-trained personnel are part of the enterprise. Research shows that accurate algorithms combined with highly qualified examiners/analysts reduce the error rate for examination decisions

to near zero. This four-hour workshop will improve the understanding and validate the legitimacy of Facial Recognition and Facial Identification as a viable forensic science discipline. The workshop will provide a high-level overview of the basic tenets of the Facial Identification Discipline.

Max Attendees: 20

Job and Internship Interview Prep Session (2 hours)
Instructor: Tiffany Edwards MS

Being an active participant within an interview setting allows for one to be engaged, present, and in control. It is easy to feel overwhelmed as a student walking into a panel interview with personnel with years of experience. Let us learn to take a breath, and ready ourselves for a positive experience, where we can present ourselves with confidence and ask for clarification on questions asked without fear of judgement. We will review tips that you can apply to make yourself more engaging and provide the opportunity to highlight your skill sets and how that could best benefit their agency in the role that you are seeking. We will discuss pre-interview preparation that will enhance the interaction and allow you to leave the interview feeling accomplished rather than defeated. Learn how to advocate for yourself and your ambition while enhancing your public speaking and listening skills.

Max Attendees: 25

Low-Light Photography (2 hours)
Instructor: Jake Arnold

This training will provide an overview of photography concepts including understanding the exposure triangle, mechanics of the off-camera flash, and how to properly document a low light crime scene. This training will assist with tackling low light conditions one might encounter at night crime scenes or areas of harsh shadows, including how to handle common in-camera problems that come with dark scenes. Crime Scene Technicians or Forensic Photographers will learn flash functions and painting with light techniques.

*Students must bring a camera and flashlight. Students may also bring a tripod and an external flash.

Max Attendees: 25

Method to the Madness – Fortifying Your Forensic Framework (4 hours)
Instructor: Douglas Young

<u>Course/Workshop Objectives:</u>

- Apply the scientific method and structured forensic frameworks in casework
- Recognize and mitigate bias while adhering to standards and best practices
- Use defensible forensic terminology

- Differentiate between source-level and activity-level propositions
- Prepare for courtroom testimony with strategies for direct and cross-examination
- Maintain impartiality by letting the evidence guide conclusions, not external pressures

Course Overview:

This course is an interactive workshop designed to strengthen the scientific, ethical, and courtroom foundations of forensic practice. Forensic science is constantly evolving, but its core responsibility remains the same: to apply objective, reliable methods in service of the evidence itself—not the prosecution or defense.

This course provides participants with practical strategies to ensure their work withstands scrutiny in both the laboratory and the courtroom. Through a focus on methodology, standards, and best practices, attendees will explore the "forensic guardrails" that safeguard credibility: following a clear framework, minimizing bias, maintaining meticulous documentation, and communicating with accuracy and integrity.

The workshop emphasizes real-world application. Participants will break down scenarios using the scientific method, analyze how terminology shapes jury perception, and engage in role-play exercises to prepare for direct and cross-examination as expert witnesses. By the end of the course, participants will leave with practical tools—a framework checklist, testimony strategies, and communication guides—that will fortify their forensic practice against challenge and reinforce their role as impartial servants of truth.

Class Content / Outline

Introduction:

- *Core principle:* Forensic investigators serve the evidence, not prosecution or defense
- What are forensic guardrails and why are they important
- Forensic Safeguards
  - Methodology
  - Standards & Best Practices
  - Bias Control
  - Documentation & Traceability
  - Communication & Integrity

Foundations of a Forensic Framework:

- Why a foundational framework
- What is a methodology and why it safeguards credibility
- The scientific method in forensic practice: observation, hypothesis, testing, falsification
- Reliability and reproducibility as cornerstones of defensibility

Best Practices & Standards in Forensic Work:

- Overview of OSAC, SWGs, ISO standards and why they matter in litigation
- Chain of custody, documentation, and traceability as pillars of admissibility
- Bias minimization techniques: cognitive/contextual bias, LSU-E, blind verification
- **Small Group Discussion:** Participants identify risk points for bias in a mock case and propose mitigation strategies.

Language, Terminology, and Forensic Communication:

- Why word choice matters: “match” vs. “consistent with,” “reasonable degree of certainty,” and other pitfalls
- Probabilistic phrasing (likelihood ratios) vs. absolute claims
- The CSI Effect: media-driven misconceptions and how to counter them
- **Interactive Exercise:** Rewrite flawed forensic testimony into scientifically defensible phrasing.

Courtroom Testimony & The Forensic Witness:

- Direct examination: explaining science clearly and without jargon
- Cross examination: handling attacks on methods, error rates, and subjectivity
- Understanding the difference between source-level and activity-level propositions – common pitfalls

Conclusion: Evidence as the Only Client

Open discussion on challenges participants face in their disciplines.
Closing thought: *“Method to the Madness” means science, standards, and integrity fortify every case.*

- **Takeaway Tools:**
    - Forensic Framework Checklist
    - Guardrails & Safeguards Quick Guide
    - Language Guide for Testimony

Max Attendees: 25

Navigating Complex Latent Print Analysis (4 hours)
Instructor: Mallory McCormick

Instructor(s) will demonstrate their analyses of complex latent prints. They will discuss the variability in analysis between examiners and identify key decision points where conflict can arise. Attendees will be given practical exercises to analyze complex prints. Discussion following the practical exercises will highlight how training and experience influence expected (and unexpected) differences between examiners. We will focus on methods for understanding and resolving conflict, with an emphasis on the importance of documentation.

Outline:

1. Introduction of Presenters and housekeeping - 10 minutes
2. Lecture: Introduction to Diagnosticity – 50 minutes
    a. Sufficiency, historical approaches, conclusion scales, and analysis
3. Break – 15 minutes
4. Lecture: Diagnosticity in Feature Quality, Quantity and Specificity - 45 minutes
5. Lecture: Conflict Resolution – 30 minutes
6. Practical Exercises – 40 minutes
7. Practical Exercise Review and Discussion - 45 minutes
8. Closing Comments and Questions - 5 minutes

*Students must bring a laptop for the exercises in this workshop.

Max Attendees: 25

Navigating Suitability Determinations (4 hours)
Instructor: Nicole Osborn

This workshop will discuss the subjective elements of suitability determinations and present two different tools to provide guidance when making these decisions (the SWGFAST Sufficiency Graph, the Good Bad Ugly Index, and defined criteria). Attendees will be given practical exercises to apply each tool and discuss their results. This workshop is part of ongoing research to determine the pros and cons of each procedure. Attendees can participate in the workshop and elect out of the data collection for the research if so desired. **Magnifying glass and manual comparative tools recommended**

OUTLINE:
60 minutes -review and discuss suitability and possible areas of concern when considering
60 minutes – review Good Bad Ugly index as a tool for guiding suitability decisions followed by practical exercise (30 impressions) – COLLECT DATA
60 minutes – review Sufficiency Graph as a tool for guiding suitability decisions followed by practical exercise (30 impressions) – COLLECT DATA
60 minutes – group discussion to review thoughts on different tools and summarize options to consider when making suitability decisions.
EVALUATION: *none* - data is collected for potential future publication

*Students must bring a magnifying glass and/or manual comparative tools, pointers, lamp or lighting assistance.

Max Attendees: 25

Searching Smart with Palms (4 hours)
Instructor: Nicole Osborn

This workshop is a review of palmar searching smart clues (shapes, deposition pressure, creases, ridge flow) with practical exercises. Designed for examiners with intermediate experience, however, beginner and advanced examiners are welcome and will benefit as well. **Magnifying glass and/or manual comparative tools recommended**

OUTLINE:
30 minutes -intro discuss general shape and morphology of hand
45 minutes -review palm shapes
45 minutes – review creases of palms, including exercise
30 minutes – discuss deposition pressure as a useful clue
90 minutes – two sets of exercises and review

EVALLUATION: Answers are reviewed for attendees to self-evaluate against ground truth

*Students must bring a magnifying glass and/or manual comparative tools, pointers, lamp or lighting assistance.

Max Attendees: 25

Testimony for the Fingerprint Examiner (4 hours)
Instructor: Cameron Stauffer

In this course students will gain the knowledge and practical experience necessary to testify in a court of law successfully and confidently as a latent print examiner or tenprint examiner. It will provide the students with the knowledge, confidence, and practical experience necessary to survive qualifying questioning (voir dire), direct, and cross-examination. Students will learn how to take control of their testimony by preparing themselves and the concerned attorney(s) for the voir dire as well as direct examination. The course will cover techniques the witness can employ to effectively explain fingerprint science, current reports and challenges in the field, and its application to the judge and jury. The course will conclude with a question/answer session for practice with challenging questions and to help with the public speaking component of trial. Examination will follow instruction and hands on activities.

Full Course Outline:
- Court preparation, qualifying questions, direct examination, cross-examination, redirect discussion, FRE, Daubert trilogy, Frye **(1.5 hours)**
- Important court cases, challenges to the field of fingerprints, published reports (NAS/PCAST/AAAS), error rate studies, discussion into AI (Artificial Intelligence) **(1 hour)**
- Hands on Exercises (mini mock trial scenario with question-and-answer session, how to answer challenging questions as well as the basics about oneself) **(1 hour)**

Graded exam/test (30 min) (must gain grade of 80% or higher to receive certificate)

Evaluation for passing workshop: **Evaluation for passing workshop**: A graded exam will be provided to attendees at the end of the course. Each attendee must receive a passing grade of 80% or higher to receive certificate.

Max Attendees: 25