Training Technical Procedures Manual

Escondido Police Department
Forensic Services Unit

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INTRODUCTION

This Crime Scene training program is designed to ensure that the trainee becomes competent in crime scene investigations and able to complete all duties assigned to them accurately, efficiently, and in a professional manner as a representative of the Escondido Police Department Forensic Services Unit. The program is composed of a series of modules consisting of reading materials, observation and demonstration, practical exercises, and demonstration of competency.

The Latent Print training program is designed to ensure that the trainee becomes competent in latent print examinations and able to complete all duties assigned to them accurately, efficiently and in a professional manner as a representative of the Escondido Police Department Forensic Services Unit.

The training programs in their entirety are designed for a Specialist who has no prior background or experience in the subject matters. The training may be customized and/or abbreviated for Specialists with experience and training from another organization. The background and experience of the individual should be assessed prior to beginning the training programs. This assessment will be made by the individual's supervisor in concurrence with Escondido Police Department management. In some instances, it may be sufficient for the Specialist to simply complete a competency test prior to beginning casework.

During the Crime Scene Investigation Training Program, the trainee will be assigned to a Specialist in order to gain an understanding of techniques employed at crime scenes. The trainee will be required to observe all techniques at the crime scene. During training or shortly after, it is recommended that the trainee also complete a basic Field Evidence Technician Course. If the Field Evidence Technician Course is not available, then another similar course may be taken in its place.

The training modules do not need to be completed in sequence. Depending on the needs of the unit and the experience level of the trainee, certain modules may be prioritized, and at their completion, a Specialist may be allowed to perform limited casework in that area.

During the Training Programs, the trainee will be expected to successfully pass all review questions, written tests, qualifying competency tests, and complete a moot court before conducting independent case work in each of the areas tested.

The training program for both training modules involves the discussion and implementation of a system of ethics and integrity that ensures the Forensic Services Unit minimizes bias and undue influence on the work conducted within the unit.

ROLES AND RESPONSIBILITIES

Technical Leader — The technical leader is responsible for monitoring the training process and for the final approval of the trainee's release to casework. The technical leader shall regularly monitor the trainee's progress and review their training binder for completeness and accuracy. At a minimum, the technical leader should meet with the trainee at the end of each module to discuss the exercises and any further actions.

Trainer — The trainer shall be the technical leader or designee. He/she is responsible for demonstrating a particular technique and observing the trainee perform the same procedure where applicable. Information gained from reading materials should be reinforced through detailed discussion of the technique during the demonstration and/or observation. This information should include both theoretical and practical aspects. The trainer is also responsible for initialing and dating the training summary checklist, verifying that the trainee is meeting each of the milestones leading to the successful completion of the module and/or training program. The trainer's initials indicate that the trainee has successfully completed the exercise, module or competency on the date indicated. Competency tests shall be evaluated by the trainer, technical leader, and/or unit supervisor prior to initialing the checklist. The trainer, when not the unit supervisor, shall periodically meet with the supervisor to discuss the progress of the trainee.

Trainee — The trainee is responsible for maintaining a training binder or notebook which shall contain the records (i.e. notes, worksheets, photographs, etc.) generated during the training program. The trainee should keep the trainer and manager informed as to their progress and/or any problems or questions that may arise. The trainee has the ultimate responsibility for learning the materials necessary to successfully complete a competency test and should take an active role in obtaining the information needed (reading, observation, discussing/asking questions, etc.) to do so. At any time a trainee feels that their training is not progressing or that they are experiencing difficulty with the exercises they should meet with their trainer, technical leader or supervisor to discuss their situation.

Instructions for the Trainee

1. The training programs are intended to be used as a guide for training and is not a rigid inflexible program.

2. A reading list will be made available for each module. The reading material will be updated as necessary to stay current with the industry standards. On-line training may be utilized by the trainer and trainee.

3. Many of the operating and technical procedures for the Forensic Services Unit can be found in the *Quality Assurance Manual*, the Crime Scene Technical Procedures Manual, *Latent Print Development Technical Procedures Manual*, and *Latent Print Analysis Technical Procedures Manual*. These manuals are an integral part of the FSU and the trainee shall be responsible for reading and understanding their contents. It shall be assumed that the pertinent Manuals shall be required reading for each and every training module.

4. The trainee is expected to keep a notebook on all work completed toward competency. This notebook will be checked on a monthly basis by the trainer(s). The notebook will include case notes, photographs, exemplars, worksheets, comments on problems that arose and how the problems were corrected, etc.

5. In addition, each segment will include a great deal of personal instruction and demonstration. This personal instruction will be designed to build on and add to the written material.

6. The lead trainer must be informed of leave dates during training.

7. Attendance at callouts or court may occur at any time. Specialists should be prepared with appropriate attire for the circumstance presented.

Training Period

1. Each section or module of training is designed to include practical exercises and/or tests to ensure the skills and objectives for that section are mastered. In some instances, on-line or approved software training (with associated tests) can be utilized as part of the training program.

2. Each section designates a time frame associated with the skills. The timeline is a guideline to provide as an estimate to the trainee and trainer of the time recommended for an employee to master the skills within that section. Again, the program is not meant to be rigid and inflexible; it is expected that individuals learn at varying rates of speed and that mitigating factors, both internal and external, will influence the time required for each module.

3. Modules can be combined, and worked simultaneously with other modules.

4. Specialists are expected to stay on task and be productive. The trainee is expected to meet deadlines and complete assignments promptly. Specialists will be expected to complete tasks with little or no supervision but should ask questions when unsure of how to proceed or are in need of additional instructions. They are expected to prioritize training, daily duties, case work and additional tasks in an efficient manner and are expected to seek advice of the trainer, technical leader, or Supervisor if unsure of how to best prioritize.

5. Each module is designed to incorporate reading material, discussion, observation, testing and application. The length of the module will be based on the competence of the trainee at or around the recommended completion time.

External Training

1. Although the trainee is required to achieve competency based upon the information they receive from the Forensic Services Unit, as well the reading material, external training is a necessary component for a well-rounded Specialist. External training can provide intense training of a specific nature in a small amount of time. External training courses also expose the trainee to methods and techniques from other areas of the world. And finally, attending external training courses also enable the trainee to network or make connections with investigators from other agencies.

2. The specific coursework of external training will be determined by the trainee's primary instructor and or Escondido Police Department management.

3. The best external training available will be sought. With this in mind, it is highly possible that courses available at any given time are not in sequence with the current training session. If the training and

funding are available, and the trainee has the requisite knowledge to take the course and gain a substantial benefit from it, then that course should be sought, regardless of the trainee's current training session. **Refer to the recommended external training (Crime Scene or Latent Print) section below for specific information on external training classes that are recommended for each Specialist trainee.**

Completion of Modules

As the trainee completes each module of training, the primary trainer will sign and date in the trainee's copy of this manual for that particular module. The primary trainer will then inform the Forensic Services Technical Leader that the trainee is authorized to perform that particular task.

Modules

a) As best as possible, the modules will reflect the work performed by competent Specialists on a regular basis.

b) The modules will be divided into two major sections. These are:
   a. Crime Scene
   b. Latent Print

c) Advanced reconstruction methods and evidence analysis, such as bloodstain pattern analysis, shooting reconstruction, latent print analysis, footwear analysis, etc., will not be covered in detail in this training manual. It is not expected that new competent Specialists will be proficient in any of these specialty areas. However, all Specialists are highly encouraged to learn a specialized skill and become an expert in that function as their career progresses.

Processing of Scenes

1. Some modules in this training manual require that the trainee be observed at actual crime scenes. These modules may only be completed once the trainer is reasonably assured that the trainee possesses the requisite skill to process a scene.

2. The trainer is responsible for seeing that the scene is processed properly and shall intervene if necessary to ensure that the trainee does not commit an error that could be detrimental to the scene or evidence within it. This will require that the trainer monitors these events very closely.

Competency Testing

This is a training program of competency to conduct latent print examinations and crime scene processing as a Specialist within the Forensic Services Unit. Specialists are expected to learn how to apply our policies and procedures in their daily work. Specialists are encouraged to take notes, ask questions, and should treat mistakes as a learning experience.
The Specialist trainee must successfully complete a variety of tests to demonstrate competency.

Crime Scene Training Manual

Escondido Police Department
Forensic Services Unit

1. CRIME SCENE TRAINING MANUAL

1.1. CS MODULE 1 – CRIME SCENE FUNDAMENTALS

GOAL:

To understand the fundamental principles and methodologies of initial crime scene functions for the Specialist.

OBJECTIVES:

The trainee will attain a practical knowledge of:

1.1 The role of the relevant personnel within Crime Scene Investigations
1.2 Ethics and Professionalism
1.3 Physical Evidence and the Crime Scene
1.4 Legal Issues and the Crime Scene
1.5 Scientific Issues and the Crime Scene
1.6 Approaching the Crime Scene
1.7 Determining Scene Scope
1.8 Initializing and Maintaining Scene Security

TIME FRAME:

1-3 Months

READING ASSIGNMENT:

Complete any associated reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
    a. Chapter 1 - Introduction
    b. Chapter 2 – Securing and Searching the Crime Scene
    c. Chapter 4 – Collection of Crime Scene Evidence
        i. Pg. 100 – Case studies (legal aspects)

MODULE TEST:

1. Complete a written test on crime scene fundamentals with a passing score of 90%.

   CS Module 1 Test

2. Must be observed at a minimum of five (5) scenes as he or she secures and develops an overall plan for processing the scene.

NOTE: At this level the trainee is not expected to know how to complete each step; but rather, to formulate an overall plan for processing. Each case will be signed and dated by an observing competent Specialist.

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1.2. CS MODULE 2 – WRITTEN DOCUMENTATION

GOAL:

To fully comprehend the importance of proper note taking, report writing, and understand how to use all FSU controlled forms.

OBJECTIVES:

2.1 The trainee will attain the ability to take concise, comprehensive, accurate, and clear notes utilizing available worksheets and forms.
2.2 The trainee will also attain an ability to organize, prepare a final typed report, and file the notes and report within the FSU case files.
2.3 The trainee will attain an ability to disseminate and upload reports to NetRMS.

TIME FRAME:

1-2 Months

READING ASSIGNMENTS:

1. Complete any associated reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.
    a. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
        i. Chapter 3 – Recording the Crime Scene

2. Review all controlled note forms relating to crime scene processing. These forms are located on the Shared Drive in the FSU folder under the folder named forms. (Shared\FSU\ ISO\Technical Manager\Forms\Crime Scene Forms\PDF Fillable) CS Worksheets

3. Pull, review and file five (5) cases from the FSU Case Files from the following list: (additional cases may be pulled with approval from Trainer)

[redacted]

MODULE TEST:

1. Complete a written test on written documentation with a passing score of 90%.
   CS Module 2 Test

Back to CS TOC

Notes

- Notes are an aid to long-term memory. While photographs will preserve a visual record of the scene and sketches will provide a reference of the relative location of evidence, only notes will help to remember what was or was not done at a particular scene. Each person shall keep notes as a record of the work that they performed.
- Notes shall reflect aspects of the scene not documented by photography or sketches.

  Notes shall reflect all or part of the following:

  - A narrative about the crime (who, what, where, when, why, and how).
  - Observations based on senses of touch, sound, sight, and smell.
  - Observations not documented by photograph or sketch, such as movement of items or altered conditions such as twilight to darkness.
  - Absence of items searched for but not found (i.e., weapons, personal items such as wallet, etc.).
  - Notes shall document work performed at the scene for later reports (i.e., blood stain pattern interpretation, fingerprinting particular locations or items, chemical tests performed, etc.).
  - Positions (measurements) of items of evidence.
  - Document items found at a scene, both those collected (recorded in the evidence log) and those not collected (i.e., scuffle marks in soil).
  - Note reference times (time of arrival, times of collection, etc.).

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1.3. CS MODULE 3 – PHOTOGRAPHY

GOAL:

To learn all aspects of and become proficient in crime scene and forensic photography.

OBJECTIVES:

The trainee will attain a practical knowledge of:

- 3.1 Operating a digital single-lens-reflex (SLR) camera
- 3.2 Understand the functions of the strobe unit and its use with the digital SLR camera
- 3.3 Understand the proper sequence for photographing various crime scenes
- 3.4 Understand the proper way to photographically document impression evidence
- 3.5 Understand how to properly photograph night time scenes
- 3.6 QueTel Evidence System
  - 3.6.1 Understand how to operate QueTel to include the uploading and exporting of digital images, administration of accounts and users, and general functions of the system.
- 3.7 Crime scene photography
  - 3.7.1 As required for the scenes of homicides, suicides, sexual assaults, robberies, unusual deaths, burglaries, etc.
- 3.8 Injury photography
  - 3.8.1 To include domestic abuse injuries, sexual assault injuries, bite mark injuries, pattern-type injuries, etc.
- 3.9 Evidence photography
- 3.10 Other photography
  - 3.10.1 To include motor vehicle accidents, industrial accidents, investigative documentation, police ceremonial events, etc.
- 3.11 Digital videography

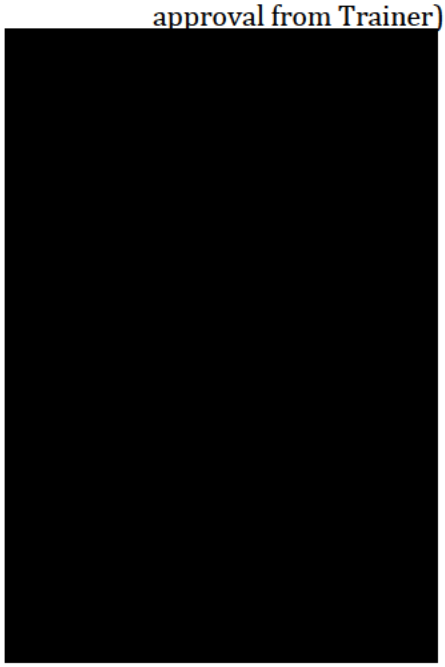
TIME FRAME:

1-3 Months

READING ASSIGNMENTS:

1. *Crime Scene Photography, 2nd Edition* by Edward M. Robinson
   a. Chapter 1 – History of Forensic Imaging
   b. Chapter 2 - Composition and Cardinal Rules
   c. Chapter 3 - Basic Exposure (non-flash) Concepts
   d. Chapter 4 - Focus, DOF and Lenses
   e. Chapter 5 - Electronic Flash
   f. Chapter 6 - Crime Scene Photography
2. Watch the video: ***Modern Marvels, Captured Light: The Invention***

3. Review photographs of five of the following cases: (additional cases may be pulled with approval from Trainer)



4. Review video of five of the following cases: (additional cases may be pulled with approval from Trainer)

EXERCISES:

1. Complete non-crime scene photograph exercises to illustrate an understanding and competence with specific photographic topics. These assignments will be documented with digital records which will be saved in a special file created by the training Specialist and uploaded to QueTel under case #: Test0000. In addition, the trainee will assist competent Specialists in photographing crime scenes. At the completion of this module, a copy of this digital record shall be turned over to the Technical Leader for review and acceptance. Guidance may be requested. The exercises can be found in Training Module Crime Scene Module 3 Exercises. CS Module 3 Exercises.docx

CS MODULE 3 – PHOTOGRAPHY (cont.)

The photographic topics shall be:

- Composition and Perspective
- Aperture and Shutter Speed
- Exposure Modes
- Lighting with Flash
- Using Various ISO Speed; Over-Exposing and Under-Exposing
- White Balance
- Rear Synch Flash

MODULE TEST:

1. Demonstrate a practical skill in all forms of crime scene photography to include crime scene, evidence, latent print, and comparison quality photographs. This practical exercise will be monitored by a competent Specialist and evaluated based on technique, documentation, and preservation. Copies of the images produced by the trainee shall be stored in in QueTel under case #: Test0000. CS Module 3 Exercises.docx (Page 9).

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CS General Crime Scene Photographic Tips – including but not limited to

Homicides:

(1) Exterior of the residence
(2) Shoe prints
(3) Tire treads
(4) All rooms of the interior of the residence
(5) Evidence of struggle
(6) Bloodstains and void patterns
(7) Location of body
(8) Telephones
(9) Trash
(10) TV and lights on and off
(11) Food in cooking stages
(12) Coffee cups
(13) Drinking glasses
(14) Liquor bottles
(15) Toilets and sinks
(16) Victim's property
(17) Victim's hands and wrists, both inside and outside
(18) Forced entry or lack of
(19) Weapons
(20) Trace evidence
(21) Wound Patterns

Suicides (hanging):

(1) Position of body
(2) Location of knots
(3) Height of body from ground
(4) Items near body
(5) Possible notes left by victim
(6) Lividity in the body
(7) Petechial hemorrhage in the eyes, if visible

Drug overdose:

(1) Position of body
(2) Foaming from the mouth
(3) Any drugs near the body
(4) Color of the skin
(5) Hands
(6) Notes left by victim
(7) Injection marks

Drownings:

(1) Position of body
(2) Position of mouth
(3) Wounds and bruises
(4) Items in the hands and hair
(5) Wrists and ankles for binding marks
(6) Any scavenger, animal or insect on or near body

Electrical death:

(1) Electrical contact
(2) Lighting fixtures
(3) Frayed wires
(4) Exposed wires
(5) Body color - odor
(6) Clothing

Burglary/Robbery photograph the following:

(1) Point of entry
(2) Point of exit
(3) Other doors and windows
(4) Condition of rooms/environment
(5) Articles left at scene
(6) Trace evidence
(7) Tool/weapon marks
(8) Shoe impressions (inside/outside)
(9) Fingerprints
(10) Area of theft

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1.4. CS MODULE 4 – CRIME SCENE SKETCHING

GOAL:

To develop the ability to draw a rough sketch including measurements, to aid in the creation of a finalized sketch.

OBJECTIVES:

4.1 The trainee will acquire the ability to make a rough and a finalized computer aided sketch.

4.1.1 Indoor Scene

4.1.2 Outdoor Scene

4.2 The trainee will acquire the ability to utilize the FARO 3D scanner and create a finalized project using the associated Scene Software.

4.2.1 FARO Scene

TIME FRAME

1 Month

READING ASSIGNMENTS:

1. *Practical Crime Scene Processing and Investigation, 2nd Edition* by Ross M. Gardner
   Chapter 7 - Crime Scene Sketching and Mapping
2. *Crime Scene Investigation and Reconstruction, 3rd Edition* by Robert R. Ogle Jr.
   Chapter 4 – Crime Scene Sketches
3. Focus 3D SCENE Training Manual
   - **Recommended / Reference Material**

MODULE EXERCISE:

1. Complete a rough sketch of a simulated indoor crime scene using the triangulation, baseline, or coordinate method of measuring and an overhead view (bird's eye view) method of sketching. The indoor scene must include at least two rooms, five items of evidence and one additional item of evidence elevated on a wall (simulate blood spatter or bullet hole). Guidance may be requested.
2. Under the direction of a competent Specialist, the trainee will complete a rough sketch of a simulated outdoor crime scene using the triangulation, baseline, or coordinate method of measuring and an overhead view (bird's eye view) method of sketching. The outdoor scene must include at least 4 parking stalls and five items of evidence. Guidance may be requested.
3. Under the direction of a competent Specialist, the trainee will learn to utilize the FARO 3D Scanner for documenting indoor, outdoor scenes and vehicle diagramming. The trainee will then learn to process the scans in the SCENE Software to create a finalized computer generated project. Guidance may be requested.

MODULE TEST:

1. A written report will be completed. The report can be one report including all three (3) diagrams or each diagraming method can have its own report. All rough sketch notes and completed computer generated diagrams will be attached to the report(s).
    a. Complete a final computer aided drawn sketch of a simulated indoor crime scene using the triangulation, baseline, or coordinate method of measuring and an overhead view (bird's eye view) method of sketching. The indoor scene must include at least two rooms, five items of evidence and one additional item of evidence elevated on a wall (simulate blood spatter or bullet hole).
    b. Complete a final computer aided drawn sketch of a simulated outdoor crime scene using the triangulation, baseline, or coordinate method of measuring and an overhead view (bird's eye view) method of sketching. The outdoor scene must include at least 4 parking stalls and five items of evidence.
    c. Complete a final sketch utilizing the FARO 3D Scanner for documenting either an indoor scene, outdoor scenes or vehicle diagramming. The trainee will complete a finalized computer generated project.
2. Complete a written test on the requirements of scene sketching with a passing score of 90%. CS Module 4 Test

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1.5. CS MODULE 5 – EVIDENCE DETECTION, COLLECTION, HANDLING, AND PACKAGING

GOAL:

To acquire the ability to properly detect, collect, handle, and package a wide array of evidence types from various types of crime scenes.

OBJECTIVES:

5.1 The trainee will acquire the ability to detect a wide assortment of evidence types and be able to properly collect, preserve and package that evidence to ensure the integrity of the evidence, minimize contamination, and maximize evidentiary potential.

TIME FRAME:

1 Month

READING ASSIGNMENTS:

1. *Practical Crime Scene Processing and Investigation* by Ross M. Gardner
   - Chapter 5 - Assessing the Scene
2. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
   - Chapter 4 – Collection of Crime Scene Evidence
   - Chapter 5 – Physical Evidence
   - Chapter 9 – Firearms, Tool marks, and Other Impressions
   - Chapter 13 – Trace Evidence I: Hairs and Fibers
   - Chapter 14 – Trace Evidence II: Paint, Glass and Soil
   - Chapter 17 – Document Examination
3. *Crime Scene Investigation, The Forensic Technicians Field Manual* by Tina Young & P.J. Ortmeier
   - Chapter 4 - Physical Evidence Collection and Analysis

MODULE EXERCISE:

1. Evidence collection and preservation to include evidence marking and package labeling of at least 5 items of evidence. This assortment shall contain at least one item to be packaged in a Kpak, paper bag, and box. Each item will be properly documented on controlled note forms / worksheets and entered into QueTel under case #: Test0000. A written crime scene report will also be completed. This report will include all items packaged. Guidance may be requested.

MODULE TEST:

1. Package evidence including trace, contact DNA and reference oral swab. Each item will be properly described on controlled note forms / worksheets and entered into QueTel under case #: Test0000. A written crime scene report will be completed documenting all items packaged.

   Complete a written test on the requirements of evidence collection and preservation with a passing score of 90%. CS Module 5 Test

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1.6. CS MODULE 6 – LATENT PRINT DETECTION, PROCESSING AND RECOVERY

GOAL:

To achieve sufficient skills to develop identifiable friction ridge detail from surfaces at a crime scene and to determine when in-lab processing is required or preferable.

OBJECTIVES:

The trainee will attain the following skills:

6.1 Locating surfaces with potential usable latent print impressions

6.2 Identifying which surfaces can be processed at the scene with powders and which surfaces require in-laboratory processing methods

6.3 Develop proper techniques for lifting prints from various surfaces

6.4 Photograph latent print impression evidence if necessary

6.5 Collection and preservation of physical evidence to be processed in-lab for latent prints

6.6 Develop the ability to take elimination prints as well as major case prints

TIME FRAME:

1 – 3 months.

READING ASSIGNMENTS:

1. *The Fingerprint Sourcebook*, U.S. Department of Justice
   a. Chapter 3 - Embryology and Morphology of Friction Ridge Skin
   b. Chapter 7 – Latent Print Development
   c. Chapter 8 – The Preservation of Friction Ridges
2. *Scott's Fingerprint Mechanics*, Walter Scott
   a. Chapter 1 - Fingerprint Identification
   b. Chapter 4 - Fingerprint Equipment
   c. Chapter 5 - Latent Fingerprint Powder Techniques
3. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
   a. Chapter 5 – Fingerprint Classification and Processing

MODULE EXERCISES:

1. Process ten (10) items of evidence provided by the trainer. Complete all note forms as if at a crime scene. (S:\FSU\Forms\CS Worksheets) Enter all information and notes into QueTel. Complete a written Crime Scene report. Guidance may be requested.

MODULE TEST:

1. Process five (5) items of evidence provided by the trainer. Complete all note forms as if at a crime scene. (S:\FSU\Forms\CS Worksheets) Enter all information and notes into QueTel. Complete a written Crime Scene report.

   Complete a written test on latent print detection, processing and recovery with a passing score of 90%. CS Module 6 Test

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1.7. CS MODULE 7 – FOOTWEAR AND TIRE TREAD IMPRESSION EVIDENCE

GOAL:

To achieve sufficient skills to locate, enhance, and recover footwear & tire-tread evidence.

OBJECTIVES:

The trainee will attain knowledge and skill in the following:

7.1 Detecting footwear and tire-tread evidence
7.2 Enhancement of footwear impressions using lighting, photographic, and chemical methods
7.3 Photography of footwear and tire-tread impression evidence
7.4 Casting techniques
7.5 Lifting methods using gelatin lifters, electrostatic dust lifter, tape and/or adhesive lifters
7.6 Proper handling, collection, and preservation of casts, gel lifters, and electrostatic dust lifts for permanent preservation.

TIME FRAME:

1 Month

IMPORTANT NOTE:

Analysis, comparison, and evaluation of footwear and tire-tread impression evidence is not the purpose of this training module and the basic training provided to Specialist trainees will not provide expertise in this field. Such expertise is attainable only with further specialized training and experience.

READING ASSIGNMENTS:

1. *Footwear Impression Evidence Detection, Recover, and Examination*, 2nd Edition by W. Bodziak
    a. Chapter 2 – Photography of Footwear Impressions
    b. Chapter 3 – Casting Three-Dimensional Footwear Impressions
    c. Chapter 4 – Treatment of Two-Dimensional Footwear Impressions
    d. Chapter 5 – The Enhancement of Footwear Impressions

MODULE 7 – FOOTWEAR AND TIRE TREAD IMPRESSION EVIDENCE (cont.)

MODULE EXERCISES:

1. Complete multiple exercises regarding the proper handling, collection, and preservation of mock impression evidence. In order to preserve impression evidence, the trainee will utilize:
   a. Gelatin lifters
   b. Electrostatic dust print lifter
   c. Casting material
   d. Tape/adhesive lifters
   e. Once the impression evidence has been collected, photograph the collected impression utilizing methods from Module 3. The photographs are to be uploaded to QueTel under case #: Test0000.
   f. After the proper photographs have been taken, package the lifts in the appropriate manner utilizing a shoe casting box, zip ties, tape, and/or other suitable method for securing the impressions without damaging the evidence.
   g. Seal the evidence properly as presented in Module 5.
   h. Impound evidence items in QueTel under case #: Test0000.
   i. A written report will be completed. This report will include the items of evidence collected during part 1a – 1d. This can be done as a single report or as individual reports. Any notes taken during this module should be attached to the report. All properly packaged items and the final report should be turned in to the Trainer for review. Guidance may be requested.

MODULE TEST:

1. Demonstrate a practical ability to enhance footwear evidence. At least one (1) impression shall be enhanced by lighting & photographic techniques **and** at least one (1) impression will be lifted using gelatin lifters, electrostatic dust lifter, tape, or adhesive lifters. Copies of the images shall be forwarded to the Trainer and uploaded to QueTel under case #: Test0000. The collection method of the impression that was photographed will be impounded to QueTel under case #: Test0000. The proper packaging should be selected along with labeling and sealing.
2. Demonstrate a practical ability to make a dental-stone cast of at least one footwear impression and one tire-tread impression. The casts shall be properly photographed. This practical exercise will be monitored by a competent Specialist and evaluated based on technique, documentation, and preservation. Copies of the images produced shall be forwarded to the Trainer and uploaded to QueTel under case #: Test0000. The collection method of the impression that was photographed will be impounded to QueTel under case #: Test0000. The proper packaging, labeling and sealing should be selected.
3. A written report will be completed to include the items of evidence collected during the CS Module 7 Test.
4. Complete a written test on latent print detection, processing and recovery with a passing score of 90%. CS Module 7 Test

Back to CS TOC

1.8. CS MODULE 8 – BIOLOGICAL EVIDENCE: DETECTION, SCREENING, AND COLLECTION

GOALS:

To achieve the necessary skills to evaluate items for biological evidence, and to properly collect, record, and preserve this evidence.

OBJECTIVES:

The trainee will attain knowledge and skill in the following:

8.1 Presumptive testing methods for the presence of blood.
8.2 Best techniques to swab evidence for biological material; where to swab for the more probative biological evidence; and in a manner least destructive to other potential evidence.
8.3 Problems associated with cross-contamination and how to avoid it.
8.4 Demonstrate acceptable note taking to document the search, collection and preservation of biological evidence.
8.5 Utilization of an Alternate Light Source (ALS) for the detection and screening of biological material.
8.6 Proper use of Personal Protective Equipment (PPE) utilization to avoid exposure and contamination.

TIME FRAME:

1 Month

READING ASSIGNMENT:

Complete any required reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
    a. Chapter 4 – Physical Evidence Collection and Analysis; Page 82-88
    b. Chapter 5 – Fingerprint Classification and Processing; Page 125-126
2. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
    a. Chapter 15 – Biological Stain Analysis
    b. Chapter 4 – Collection of Crime-Scene Evidence; Pages 88-89

MODULE TEST:

1. Demonstrate a practical skill at the collection of cellular material from simulated evidence, preservation of this evidence and documentation of the search, collection and preservation of the DNA evidence.
    a. Use the appropriate note forms to document the following exercises.
        i. Use ALS to locate a red stain
        ii. Photograph the red stain using the ALS
        iii. Document the red stain utilizing note forms
        iv. Photograph Presumptive test of the red stain
        v. Swab the red stain (Stain Collection Kit)
        vi. Preserve and package the swab
            1. Label packaging appropriately
        vii. Upload photographs to QueTel under case #: Test0000
        viii. Impound Stain Collection Kit to QueTel under case #: Test0000
        ix. Complete a written report. Attach all note forms and QueTel documents to the finished report

2. Complete a written test on biological evidence collection from items of evidence with a passing score of 90%. CS Module 8 Test

Back to CS TOC

1.9. CS MODULE 9 –TOOL MARK IMPRESSION EVIDENCE

GOAL:

To develop the ability to collect tool mark impression evidence from wood, metal, putty, or paint.

OBJECTIVES:

The trainee will attain knowledge and skill in the following:

9.1 Proper collection of tool mark evidence from various objects and surfaces using casting material or other acceptable forms of recovery products for tool mark impression evidence.

TIME FRAME:

1 Month

READING ASSIGNMENT:

Complete any required reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
    a. Chapter 9 – Impression Evidence; Page 252-253
2. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
    a. Chapter 9 – Firearms, Tool marks, and Other Impressions, Page 216 - 224
3. *Practical Crime Scene Processing and Investigation* by Ross M. Gardner
    a. Chapter 2 – Understanding the Nature of Physical Evidence, Page 50-54
    b. Chapter 9 – Basic Skills for Scene Processing

MODULE TEST:

1. Demonstrate a practical ability to properly photograph tool mark impression evidence.
    a. At least one (1) impression shall be enhanced by lighting & photographic techniques.
    b. Upload the images to QueTel under case #: Test0000 and also forwarded to the Trainer.

2. Demonstrate a practical ability to make a cast of an impression.
    a. At least three (3) tool mark impressions will be cast.
    b. Impound the impressions to QueTel under case #: Test0000 and also forwarded to the Trainer.

3. Complete a written report. Forward all notes, report and evidence from part 1 & 2 of the Module Test to the Trainer.

4. Complete a written test on tool mark impression evidence with a passing score of 90%.
   CS Module 9 Test

Back to CS TOC

1.10. CS MODULE 10 – GUN SHOT RESIDUE COLLECTION

GOAL:

To develop the ability to collect gunshot residue (GSR) from a person or evidence items suspected to be in near proximity of a shot firearm.

OBJECTIVES:

The trainee will attain knowledge and skill in the following:

10.1 Proper collection of gunshot residue from a person suspected of shooting a firearm, evidence items that may have been in close proximity of the shooter such as clothing, vehicle door panels, and other persons involved in the shooting.

TIME FRAME:

1 Month

READING ASSIGNMENT:

Complete any required reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
    a. Chapter 10 – Firearm Evidence; Page 274-275
    b. Chapter 13 – Suspect and Live Victim Processing; Page 341-342
2. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
    a. Chapter 9 – Firearms, Tool marks, and Other Impressions, Page 208 - 214
3. *Practical Crime Scene Processing and Investigation, 2nd Edition* by Ross M. Gardner
    a. Chapter 2 – Understanding the Nature of Physical Evidence, Page 44

MODULE TEST:

1. Demonstrate a practical ability for the collection of gunshot residue materials through the use of a GSR kit. This practical exercise will be monitored by a competent Specialist and evaluated based on technique, documentation, and preservation.
    a. Collect one (1) gunshot residue collection kit
    b. Complete all note forms
    c. Impound in QueTel under case #: Test0000
    d. Complete a written report. Forward all notes, report and evidence to Trainer.

2. Complete a written test on gunshot residue collection with a passing score of 90%.
   CS Module 10 Test

Back to CS TOC

1.11. CS MODULE 11 – AUTOPSY DOCUMENTATION

GOAL:

To develop the ability to document and collect evidence during an autopsy.

OBJECTIVES:

The trainee will attain knowledge and skill in the following:

11.1 Taking proper photographs during an autopsy. These photographs will include but are not limited to macro photography, injury photography, deep tissue bruising photography, etc.

11.2 Collection of evidence during an autopsy. Typical evidence from an autopsy will include but is not limited to paper bags, clothing, swabs, hair samples, nail scrapings, insects, projectiles and personal belongings.

TIME FRAME:

1 Month

READING ASSIGNMENTS:

Complete any required reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
    a. Chapter 14 – The Postmortem Examination
2. *Forensic Science, From the Crime Scene to the Crime Lab, 3rd Edition* by Richard Saferstein
    a. Chapter 6 – Death Investigation

Reference Materials
Autopsy Worksheet

MODULE TEST:

1. Attend five (5) autopsies and demonstrate a practical ability of taking proper photographs and collecting evidence during an autopsy. During the five (5) autopsies, the trainee must:
    a. Take photographs. Upload the photographs to QueTel under case #: Test0000 (unless otherwise directed).
    b. Collect evidence and impound to QueTel under case #: Test0000 (unless otherwise directed).
    c. Complete all note forms.
    d. Write a report for each autopsy attended. Forward all notes, evidence, photographs and report to the Trainer, unless otherwise directed.

2. Complete a written test on autopsy documentation with a passing score of 90%.
    CS Module 11 Test

Back to CS TOC

1.12. CS MODULE 12 – FINAL EVALUATION

Once the appropriate training modules have been successfully completed, it is important to be able to put them to use in conducting crime scene investigations. Proper documentation such as notes, photography, sketching and the ability to choose proper methods and techniques are important in the processing of a crime scene.

OBJECTIVES:

To demonstrate the use of appropriate methods and techniques in processing a crime scene, including the use of proper documentation and report writing.

MODULE TEST:

1. A mock scene will encompass aspects that have been covered in the CS Modules 1 – 10. A final report will be written that will be utilized in CS Module 13 (Courtroom Testimony).
   CS Module 12 Test

EVALUATION CRITERIA:

A specialist performing crime scene investigations must be competent in the recognition, detection, collection and preservation of evidence. The criteria listed below outline the competencies required for crime scene investigation and provide an assessment tool in the evaluation of the crime scene competency test.

12.1 Crime Scene Assessment/Crime Scene Search:

a. Demonstrate the knowledge and ability to identify and employ an appropriate crime scene barrier in order to best preserve the scene.
b. Demonstrate the knowledge and ability to conduct a systematic search.
c. Demonstrate the use of appropriate personal protective equipment (e.g., gloves, booties, masks, etc.)
d. Demonstrate an ability to assess health and safety risks and takes adequate safety precautions.

12.2 Crime Scene Documentation:

a. Demonstrate the use of appropriate and approved technique(s) to record the crime scene. Technique(s) may include one or more of the following:
   1. notes, worksheets, forms, etc.
   2. photography, video, etc.
   3. diagrams
   4. rough sketches; computer sketches
b. Demonstrate the ability to write a crime scene report.

12.3 Evidence Recognition and Detection:

a. Demonstrate an ability to recognize physical evidence.
b. Demonstrate the proper use of detection methods such as:
    1. presumptive testing (e.g., blood, etc.)
    2. alternate light source
    3. metal detector

12.4 Evidence Collection:

a. Demonstrate the proper techniques used in the collection, packaging and marking of physical evidence.
b. Demonstrate proper photography techniques used to document evidence items such as:
    1. prints
    2. shoe/tire impression
    3. blood spatter

12.5 Evidence Preservation:

a. Demonstrate the proper techniques for handling and preserving evidence such as:
    1. biological evidence (wet or dry)
    2. weapons
    3. footwear or tire tread (photography, lifters and/or castings)

Back to CS TOC

1.13. CS MODULE 13 –COURTROOM TESTIMONY

GOAL:

To develop a basic understanding of courtroom procedures in order to provide competent, precise, and accurate testimony.

OBJECTIVE:

13.1 The trainee will gain the ability to testify in a courtroom setting by providing competent and accurate testimony while remaining objective and truthful about the information they will be providing to the court.

TIME FRAME:

1 Month

READING ASSIGNMENT:

Complete any required reading. The assigned reading list may include texts, journal articles, meeting abstracts/proceedings, on-line courses, etc.

1. *Crime Scene Investigation: The Forensic Technician's Field Manual* by Tina Young & P.J. Ortmeier
    a. Chapter 15 – Report Writing and Courtroom Testimony

MODULE TEST:

1. Give testimony on crime scene investigation in a "Moot Court" setting. The testimony will be based off of reports, photographs, notes, and evidence collected during training.
   CS Module 13 Test

2. Prepare a "Curriculum Vitae" for court.

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1.14. CS MODULE 14 –SHADOW PHASE

GOAL:

To be able to process a scene without assistance.

OBJECTIVES:

The trainee will gain the ability to process a crime scene without assistance or guidance from another qualified Specialist in the following areas:

14.1 Photography
14.2 Evidence Collection
14.3 Sketching
14.4 Latent Print Development
14.5 Autopsy Documentation and Evidence Collection
14.6 Subject Processing
14.7 Vehicle Processing

TIME FRAME:

No Time Frame (depends on incoming cases)

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

MODULE TEST:

Each area listed above will be evaluated for competency on an individual basis. The completion of more than one area can occur within one scene. The trainee will not be signed off to conduct independent case work until all areas listed above are completed and the trainee is deemed competent.

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1.15. CS RECOMMENDED EXTERNAL TRAINING

The Specialist trainee should consider attending any/all of the following trainings (or other training in a similar subject area). This list is by no means exhaustive of all external training classes recommended to the trainee:

- Basic Field Evidence Technician Course
- Advanced Field Evidence Technician Course
- Finding Latent Evidence with Chemistry & Light
- Courtroom Testimony Techniques - Success Instead of Survival
- Basic Forensic Digital Imaging
- Field Evidence Technician Course-CSU-Long Beach
- Bloodstain Pattern Interpretation
- Advanced Field Evidence Technician Course-CSU-Long Beach
- Basic Crime Scene Video
- Fingerprint and Trace Evidence Detection on Skin
- Digital Forensic Photography
- Homicide Scene Management
- Biological Evidence Screening and Serology
- Investigation of Arson Cases
- Internal Auditing to ISO/IEC 17020

Notes

- Notes are an aid to long-term memory. While photographs will preserve a visual record of the scene and sketches will provide a reference of the relative location of evidence, only notes will help to remember what was or was not done at a particular scene. Each person shall keep notes as a record of the work that they performed. (Refer to EPD DI 1.23 for additional information regarding notes.)

- Notes shall reflect aspects of the scene not documented by photography or sketches.

  Notes shall reflect all or part of the following:

  - A narrative about the crime (who, what, where, when, why, and how).
  - Observations based on senses of touch, sound, sight, and smell.
  - Observations not documented by photograph or sketch, such as movement of items or altered conditions such as twilight to darkness.
  - Absence of items searched for but not found (i.e., weapons, personal items such as wallet, etc.).
  - Notes shall document work performed at the scene for later reports (i.e., blood stain pattern interpretation, fingerprinting particular locations or items, chemical tests performed, etc.).
  - Positions (measurements) of items of evidence.
  - Document items found at a scene, both those collected (recorded in the evidence log) and those not collected (i.e., scuffle marks in soil).

  Note reference times (time of arrival, times of collection, etc.).

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REVISION HISTORY

Refer to the QA11 Document Control for revision information.

Latent Print Training Manual

Escondido Police Department
Forensic Services Unit

2. LATENT PRINT TRAINING MANUAL

2.1. LP MODULE 1 – PRE-PROCESSING & LABORATORY SAFETY

GOAL:

To evaluate the ability to process latent print evidence using FSU Latent Print SOPs.

OBJECTIVES:

1.1 Develop an awareness of the safety issues and procedures related to the processing lab.

1.2 Familiarization with all case note forms, report templates, chain of custody and Mideo procedures.

1.3 Develop proficient skill in the use of specialized processing equipment in order to develop and preserve the highest quality latent impressions possible.

1.4 Understand chain of custody.

2.1.1. CHAIN OF CUSTODY AND HANDLING EVIDENCE

READING ASSIGNMENTS:

1. Escondido Police Department Forensic Services Unit Safety Manual.
2. Read the section on evidence packaging and handling from the Quality Assurance Manual.

ASSIGNMENTS:

1. Write a brief essay describing what the term "chain of custody" means and why it's important to our job. Include information naming or showing the forms our office uses to maintain chain of custody.

2. Demonstrate to your trainer how to properly open, handle and repackage five items of non-evidence.

3. Create a PowerPoint Presentation on LP Module 1 – Pre-Processing & Laboratory Safety and all subsections of Module 1 (Evidence Processing: Case Notes and Documentation). This detailed PowerPoint should include the important details learned in this module and any highlights of interest. This is the beginning of a thorough Power Point presentation that will be built module by module until you are completely finished with Latent Print Training. This PowerPoint will be your reference guide for Court Testimony. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

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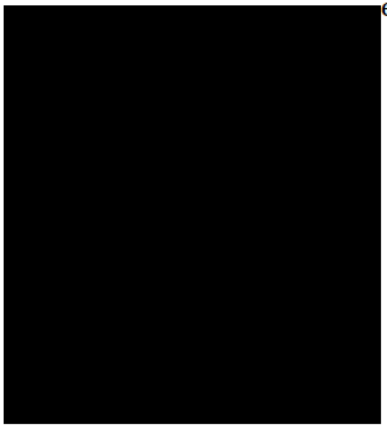
2.1.2. EVIDENCE PROCESSING: CASE NOTES AND DOCUMENTATION

READING ASSIGNMENTS:

1. Read the section on evidence note forms and documentation from the Latent Print Development Technical Procedures Manual.
2. Read the Mideo Case Creation Instructions.
3. Review at least 5 of the following cases, including the photographs located in QueTel. [redacted] ewed will approval from the Trainer.



ASSIGNMENTS:

1. Obtain at least two copies of each type of form you will be using in the lab and create a reference example for each form. Approved LP Forms

2. Locate the LPD Report Template. Become familiar with this Report. Obtain at least two copies of the report.

3. Properly Document 10 non-evidence items in the laboratory.
    a. Photography - Five items will be documented using the DCS-5 System, and five items will be documented using the assigned digital camera.
    b. Complete a set of notes for all 10 items
    c. Complete a report for the 10 items of non-evidence. All 10 items can be included in one report OR each items can have a separate report.

Back to LP TOC

2.1.3. PRE-PROCESSING AND LABORATORY SAFETY WRITTEN TEST

MODULE TEST:

1. Complete the Pre-Processing and Laboratory Safety Test. This is an open book test. You must achieve 90% or more to pass the test.

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2.2. LP MODULE 2 – LATENT PRINT VISUALIZATION & RECOVERY

GOAL:

To learn what methods of evidence processing can be used for different types of surfaces and how to preserve the impressions once developed.

OBJECTIVES:

2.1 The trainee will demonstrate a satisfactory understanding of all factors which pertain to the proper sequential processing methods for porous and non-porous items, including procedures for special circumstances.

2.2 The trainee will demonstrate working knowledge of processing procedures and independently determine the correct processing method for a wide variety of items (after referring to manuals, articles, and consulting with other experts).

2.3 The trainee will demonstrate a comprehensive understanding of all aspects of the evidence processing including an understanding of any chemical elements involved.

2.4 The trainee will become familiar with the constituents of latent print residue and how they react with different processing techniques.

2.5 The trainee will demonstrate satisfactory knowledge of preservation procedures using photography, lifting, and other methods.

2.6 Evaluation of this understanding shall be based upon successful completion of each lesson in this section, the trainer's observation and a score of at least 90% on the Evidence Processing Competency Test(s) both written and practical test. Each section may be tested separately.

ASSIGNMENTS:

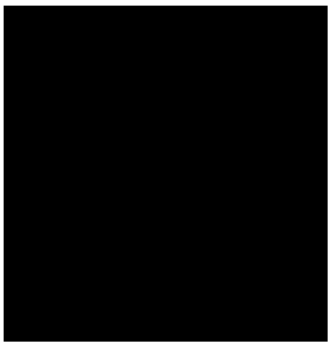
1. PowerPoint – Continue to build on the PowerPoint created in the previous Module (Module 1). Reduce the number of slides for Module 1. Module 1 should only contain one or two slides. Follow the Module 1 slides with a detailed PowerPoint on the current module (LP Module 2 – Latent Print Visualization & Recovery). Keep this portion of the presentation to a maximum of 50 slides. This is how the building of the PowerPoint will continue through the duration of the Latent Print Training Program. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

2.2.1. LATENT PRINT DEVELOPMENT TRAINING PROGRAM

1. Use the following link to complete the Latent Print Development Training Exercises under the guidance of a Trainer. These exercises will be completed after you have learned about the method. Latent Print Development Training Exercises

2. Use the following link to locate the corresponding Chemical Test associated with Latent Print Development Training Exercises. You must achieve 90% or more to pass the test. Chemical Tests

3. Review the at least 5 of the following cases, including the photographs located in QueTel. Additional cases can be reviewed with approval from the Trainer.



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2.2.1.1. DNA CASES

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Write a brief essay: List the steps, in sequence, for processing items for DNA evidence. How and why do these processing steps differ from those used for any other evidence submitted for latent print processing?

2. Process two items of evidence, applicable to casework, for DNA. Use appropriate handling techniques and proper documentation.

3. Impound derivative items in QueTel. Include all documents with final report.

4. Complete all development note forms for the two items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on the items using the appropriate report template. All items can be included in one report OR each items can have a separate report.

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2.2.1.2. NON-POROUS SURFACES

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and create a list of processing methods used on non-porous surfaces. Include the latent print residue constituents they react/interact with and methods for preservation.

2. Create a flow chart for sequential processing using five of the processing techniques you researched. Explain why the techniques must be applied in that order.

3. Complete Exercise 1 of the Latent Print Development Training Exercises. Process six non-porous items (non-evidence) using various types of fingerprint powders, each type of lift tape, and the cyanoacrylate available in the lab. Take proper notes on a minimum of five items using the Latent Print Development case note forms and input in to MIDEO Caseworks.

    a. Place fingerprints and palm prints (single and simultaneous) on a variety of surfaces (cans, bottles, glass, mirrors, tiles, etc.).
    b. Process all items using cyanoacrylate, then the appropriate powder for that particular surface.
    c. Lift latent prints using 2-inch and 4-inch lifting tape and place on lift cards. Collect a minimum of 30 cards – at least ten cards for each powder used. Fill out the entire backside of the lift card.
    d. Photograph a minimum of three different latent prints.

4. Impound derivative items in QueTel. Include all documents with final report.

5. Complete all development note forms for the six items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least five of the items using the appropriate report template. All five items can be included in one report OR each items can have a separate report.

MODULE TESTS:

1. Complete the Non-Porous Surfaces Test. This is an open note Test. You must achieve 90% or more to pass the test.

2. Complete the Fuming and Powder Chemical Test. You must achieve 90% or more to pass the test.

3. Complete a mock case including a finalized report. An overall report rating of 4 must be obtained.

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2.2.1.3. POROUS SURFACES

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and create a list of processing methods used on porous surfaces. Include the latent print residue constituents they react/interact with and methods for preservation.

2. Create a flow chart for sequential processing using three of the processing techniques you researched. Explain why the techniques must be applied in that order.

3. Complete Exercise 3 – 6 and 9 of the Latent Print Development Training Exercises. Take proper notes on five items using the appropriate worksheet(s) and input in to Mideo Caseworks.
   a. Place fingerprints and palm prints (single and simultaneous) on a variety of surfaces (paper, checks, phonebooks, magazines, cardboard, wood, receipts, etc.).
   b. Process all items using the currently approved methods for porous surfaces.
   c. Properly mark and scan a minimum of six latent prints. Print out the scanned latent prints and include the proper documentation.

4. Impound derivative items in QueTel. Include all documents with final report.

5. Complete all development note forms for the six items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least five of the items using the appropriate report template. All five items can be included in one report OR each items can have a separate report.

MODULE TEST:

1. Complete the Porous Surfaces Test. This is an open note quiz. You must achieve 90% or more to pass the test.
2. Complete the DFO Chemical Test. You must achieve 90% or more to pass the test.
3. Complete the Ninhydrin Chemical Test. You must achieve 90% or more to pass the test.
4. Complete the Indanedione Chemical Test. You must achieve 90% or more to pass the test.
5. Complete the Physical Developer Chemical Test. You must achieve 90% or more to pass the test.
6. Complete a mock case including a finalized report. An overall report rating of 4 must be obtained.

Back to LP TOC

2.2.1.4. ADHESIVE SURFACES

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and create a list of processing methods used on adhesive tapes. Include the latent print residue constituents they react/interact with and methods for preservation.

2. Create a flow chart for sequential processing of adhesive tape. Explain why the techniques must be applied in that order.

3. Complete Exercise 2 of the Latent Print Development Training Exercises. Take proper notes on evidence items using the appropriate worksheet(s) and input in to Mideo Caseworks.
    a. Place fingerprints and palm prints (single and simultaneous) on a variety of adhesive surfaces (duct tape, masking tape, electrical tape, mailing stamps, large adhesive envelopes, etc.).
    b. Process all items using the currently approved products for adhesive surfaces.
    c. Properly mark and scan a minimum of six latent prints. Print out the scanned latent prints and include the proper documentation.

4. Impound derivative items in QueTel. Include all documents with final report.

5. Complete all development note forms for the six items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least five of the items using the appropriate report template. All five items can be included in one report OR each items can have a separate report.

MODULE TESTS:

1. Complete the Adhesive Surfaces Test. This is an open note test. You must achieve 90% or more to pass the test.

2. Complete the Adhesive Surfaces Chemical Test. You must achieve 90% or more to pass the test.

3. Complete a mock case including a finalized report. An overall report rating of 4 must be obtained.

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2.2.1.5. BLOOD ENHANCERS

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and create a list of processing methods used for prints in blood. Include the latent print residue constituents, how they react/interact, and the methods for preservation.

2. Create a flow chart for sequential processing of items with potential prints in blood. Explain why the techniques must be applied in that order.

3. Complete Exercise 10 of the Latent Print Development Training Exercises. Take proper notes on evidence items using the appropriate worksheet(s) and input in to Mideo Caseworks.

4. Impound any derivative items in QueTel. Attach notes to final report.

5. Complete all development note forms for the items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least five of the items using the appropriate report template. All five items can be included in one report OR each items can have a separate report.

MODULE TEST:

1. Complete the Blood Enhancers Test. This is an open note test. You must achieve 90% or more to pass the test.

2. Complete a mock case including a finalized report. An overall report rating of 4 must be obtained.

Back to LP TOC

2.2.1.6. DYE STAINS

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and create a list of processing methods using (current laboratory approved) dye stains. Include the latent print residue constituents, how they react/interact, and the methods for preservation.

2. Create a flow chart for sequential processing of items using dye stains. Explain why the techniques must be applied in that order.

3. Create a chart to show the Dye Stain correlating with wavelength of the ALS and the appropriate filter.

4. Process items (non-evidence) using a variety of currently approved dye stains. Take proper notes on the items using the appropriate worksheet(s) and input in to Mideo Caseworks.
   a. Place fingerprints and palm prints (single and simultaneous) on a variety of surfaces.
   b. Process all items using cyanoacrylate, then the appropriate dye stain for that particular surface.
   c. Use the ALS to properly exam each item for latent prints.
   d. Properly mark and photograph a minimum of two latent prints. Print out the photographed latent prints and include the proper documentation.

5. Complete all development note forms for the items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least five of the items using the appropriate report template. All five items can be included in one report OR each items can have a separate report.

MODULE TEST:

1. Complete the Dye Stain Chemical Test. You must achieve 90% or more to pass the test.

2. Complete a mock case including a finalized report. An overall report rating of 4 must be obtained.

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2.2.1.7. SUDAN BLACK

READING ASSIGNMENT

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and write a summary of the uses for the chemical and any safety precautions.

2. Create a flow chart for sequential processing of items using Sudan Black. Explain why the techniques must be applied in that order.

3. Complete Exercise 7 of the Latent Print Development Training Exercises. Take proper notes on evidence items using the appropriate worksheet(s) and input in to Mideo Caseworks.

4. Complete all development note forms for the items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least four of the items using the appropriate report template. All four items can be included in one report OR each item can have a separate report.

MODULE TEST:

1. Complete the Oil Red O Sudan Black Chemical Test. You must achieve 90% or more to pass the test.

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2.2.1.8. RTX

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Research the subject and write a summary of the uses for the chemical and any safety precautions.

2. Create a flow chart for sequential processing of items using RTX. Explain why the techniques must be applied in that order.

3. Complete Exercise 11 of the Latent Print Development Training Exercises. Take proper notes on evidence items using the appropriate worksheet(s) and input in to Mideo Caseworks.

4. Complete all development note forms for the items. Enter the items into Mideo under the case number on the FSU Request Form. Write a report on at least four of the items using the appropriate report template. All four items can be included in one report OR each item can have a separate report.

MODULE TEST:

No test for this module.

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2.2.1.9. EVIDENCE PROCESSING PROFICIENCY

ASSIGNMENTS:

The trainer shall "shadow" the trainee on 10 cases. The trainee shall write on each case "Worked under the direct supervision of…" (or similar). The trainer shall pick out 8 cases for the trainee. The cases should be smaller cases with a variety of non-porous, porous, unusual substrates, DNA, blood or guns.

After these 10 cases are complete, the trainee shall be signed off to process evidence without direct supervision. However, the trainer shall continue to randomly monitor the trainees work. Also, all paperwork shall go through a technical review.

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2.3. LP MODULE 3 - MOOT COURT FOR DEVELOPMENT

GOAL:

To assess that the Specialist has the ability to articulate proper evidence handling, chain of custody, laboratory procedures, sequential processing, and other findings according to established courtroom and legal protocols and our current SOPs.

This goal will be accomplished by participating in a simulated mock trial/moot court. This will involve case scenarios which address specific aspects of latent print development. There will be a panel of Specialists and Detectives who will witness the testimony and critique it. The trainee will be evaluated on presentation and information given.

OBJECTIVES:

3.1 The trainee will present truthful, technically accurate, understandable and believable testimony in a mock trial environment. The trainee will follow all established protocols for expert witnesses.

3.2 The trainee will demonstrate the ability to describe evidence handling, chain of custody, laboratory procedure and other findings.

3.3 The trainee will develop or update a CV and be able to answer questions regarding this document.

READING ASSIGNMENT:

No assigned reading. Be sure to utilize all previous readings, notes and worksheets.

ASSIGNMENTS:

1. Create or update a curriculum vitae and have it approved.

2. Organize/prep case file materials
   a. Briefcase
   b. Review all case file materials thoroughly
   c. Know forms/acronyms
   d. Know the address of FSU
   e. Know the order in which the chemicals were used
   f. Review if latents were developed
   g. Review the number of lift cards, photographs and scans
   h. Review your report

3. Know/Prepare for the following:
   a. Attire (dress appropriately – neat and clean clothing/business attire, no flashy jewelry/watches, no visible tattoos).

   b. National standards: (Know who or what these groups are and the names of their publications).
      i. SWGFAST
      ii. IAI
      iii. FBI
      iv. FQS, FQSI ASCLD, or ASCLD/Lab and CTS
      v. NAS
      vi. Certification & Proficiency Testing
   c. Know basic sequential processing
   d. Be able to explain constituents of latent print residue
   e. Be able to explain latent print recovery factors
      i. Matrix (skin substance)
      ii. Substrate (surface)
      iii. Deposition Distortion / Pressure Distortion
      iv. Environmental Factors
      v. Development Medium

4. Present testimony in Moot Court:

   The following are possible scenarios:

   a. It will involve the processing of items completed during the shadow phase. The trainee will be able to explain chain of custody, sequential processing, latent print residue constituents, and latent print recover factors. The trainee should be familiar with the information on each item processed; if latents were developed, the number of lift cards, photographs or scans and also all information in the final report. The trainee will answer unscripted questions. They will be evaluated on their presentation and overall ability to convey information in easily understood terms. If possible, the panel will be people that do not work as Specialists.

   b. It will involve using a mock case that was processed during training. The trainee will answer unscripted questions. They will be evaluated on their presentation and overall ability to convey information in easily understood terms. If possible, the panel will be people that do not work as Specialists.

   c. It will involve a mock case that the trainee will receive the report on prior to testimony. This will not be a case or report that they are familiar with. The trainee will answer unscripted questions. They will be evaluated on their presentation and overall ability to convey information in easily understood terms. If possible, the panel will be people that do not work as Specialists.

5. The trainee will be rated on the Internal Court Testimony Evaluation form that is imbedded in the Module Evaluation Form.

6. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 & Module 2). Reduce the number of slides for Module 1 and Module 2. Module 1 and Module 2 should be comprised of no more than seven slides. Follow the Module 1 and Module 2 slides with a detailed PowerPoint on the current module (LP Module 3 – Moot Court for Development). Keep this portion of the presentation to a maximum of 10 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

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2.4. LP MODULE 4 – HISTORY

GOAL:

To achieve a comprehensive understanding of the historical contributions to fingerprints and the evolution and advancement of friction ridge detail usage as a means of identification.

OBJECTIVES:

4.1 Demonstrate and understanding of the historical contributions of fingerprint pioneers.
4.2 Demonstrate and understanding of the evolution and events that provided the foundation and advancement of friction ridge detail usage as a means of personal identification.
4.3 To effectively demonstrate a thorough understanding of the history of fingerprints for comparison.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. Mideo Lecture / Discussion – History PowerPoint Presentation
   b. (Mideo) Federal Bureau of Investigation, *The Science of Fingerprints,* Chapter 1
   c. (Mideo) Ashbaugh, D.R., *Quantitative-Qualitative Friction Ridge Analysis,* Chapter 2, 1999
   d. (Mideo) National Institute of Justice, *the Fingerprint Sourcebook,* Chapters 1

ASSIGNMENTS:

1. Research Assignment – Written
   a. Write a short paragraph for each influential person who has contributed to the fingerprint field. This should be at least 10 people. Briefly describe their contributions, among the list you must include: Whipple, Wilder, Cummins, Hale, Galton, Henry, Faulds and Herschel.
   b. Write a short paragraph for each of at least five significant court cases in fingerprint history. For example, Daubert, Frye, Madrid / Mayfield, McKie Case, etc.

2. Create a list of fingerprint organizations (historical and contemporary) include events and dates that are significant to specific organizations, what their publications are (if any), and what Industry Standards they promote (if applicable).

3. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 3). Reduce the number of slides for Module 1 - Module 3. Module 1 - Module 3 should be comprised of no more than 10 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 4 History). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

MODULE TEST:

1. Complete the Mideo History Test. Must pass with a minimum score of 90%.

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2.5. LP MODULE 5 – PATTERN INTERPRETATION

GOAL:

To evaluate the ability to process latent print evidence using FSU Latent Print SOPs.

OBJECTIVES:

5.1 Acquire the ability to understand the common terminology and definitions associated with friction ridge pattern recognition (arch, loop, whorl).

5.2 Acquire the ability to recognize fingerprint patterns based on ridge flow and Henry Classification rules.

READING ASSIGNMENT:

1. Complete the following reading assignments.
    a. (Mideo) Federal Bureau of Investigation, *The Science of Fingerprints,* Chapters 2 and 3
    b. *Journal of Forensic Identification*, Volume 68, Number 1, January – March 2018, pg 77

ASSIGNMENTS:

1. Complete the Acuity Assignment. Must pass with a minimum score of 90%.

2. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 4). Reduce the number of slides for Module 1 - Module 4. Module 1 - Module 4 should be comprised of no more than 15 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 5 – Pattern Interpretation). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

MODULE TEST:

1. Complete the Mideo TrainingWorks Pattern Exercise (100 images). Must pass with a minimum score of 90%.

2. Complete the Mideo TrainingWorks Pattern Test (100 images). Must pass with a minimum score of 90%.

3. Complete the Whorl Pattern Analysis Test. Must pass with a minimum score of 90%.

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2.6. LP MODULE 6 – CLASSIFICATION

GOAL:

To be able to properly classify a tenprint card utilizing both the HENRY and NCIC classification systems.

OBJECTIVE:

6.1 Acquire the skill to classify a tenprint fingerprint card using the HENRY Classification System and the NCIC Classification formula.

6.2 Understand and utilize the HENRY and NCIC fingerprint classification systems for filing tenprint fingerprint cards, and the FSU's internal and external filing systems.

6.3 Demonstrate the ability to classify tenprint fingerprint records using the HENRY Classification system and the NCIC Classification formula.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. (Mideo) Federal Bureau of Investigation, *The Science of Fingerprints,* Chapters 5, 6, 7 and 8
   b. (Mideo) National Institute of Justice, *the Fingerprint Sourcebook,* Chapter 5
   c. **Suggested Reading** Federal Bureau of Investigation, *The Science of Fingerprints,* Chapters 4

ASSIGNMENTS:

1. Classify 3 sets of tenprint cards (both HENRY and NCIC Classification for each card).

2. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 5). Reduce the number of slides for Module 1 - Module 5. Module 1 - Module 5 should be comprised of no more than 20 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 6 – Classification). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented to the trainer.

MODULE TEST:

No module test.

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2.7. LP MODULE 7 – BIOLOGY OF THE SKIN & FETAL DEVELOPMENT

GOAL:

To achieve a comprehensive understanding of individuality based upon the fetal development of friction ridge skin.

OBJECTIVES:

7.1 To develop an understanding of the biological aspects of friction ridge skin growth and development.

7.2 To become familiar with the different types of sweat glands, their function and the substances they produce.

7.3 Attain a comprehensive understanding of the embryological development of friction ridge skin, the skin structure, cell structure and function, and the basic premises of friction ridge analysis (persistency and uniqueness) as a means of identification.

7.4 To gain the knowledge necessary to support the premise of friction ridge skin uniqueness.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. Mideo Lecture / Discussion – Biological Aspects PowerPoint Presentation
   b. (Mideo) Montagna, W., *The Structure and Function of Skin,* Chapters 2 and 3, 1974
   c. (Mideo) Ashbaugh, D.R., *Quantitative-Qualitative Friction Ridge Analysis,* Chapter 3, 1999
   d. (Mideo) Champod, C. I., *Fingerprints and Other Ridge Skin Impressions,* Chapter 1, 2004
   e. (Mideo) National Institute of Justice, *the Fingerprint Sourcebook,* Chapters 2 and 3
   f. (Mideo) Wertheim & Maceo, *The Critical Stage of Friction Ridge and Pattern Formation*, Journal of Forensic Identification, 52(1), 2002 \35-85

ASSIGNMENTS:

1. Complete the Friction Ridge Skin Structure worksheet. Label the layers, ridges, furrows and other indicated structures.

2. Complete the Palmar and Plantar Friction Ridge Areas worksheets. Label the anatomical regions/friction ridge surfaces of the fingers, palms and feet. Include creases and common terms for areas of ridge detail.

3. Fill in the Friction Ridge Growth Timeline Include significant events occurring in the formation of the friction ridges, the growth of the hand itself and any volar pad activity for the given period during fetal gestation.

4. Complete the Mideo Crease Test.

5. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 6). Reduce the number of slides for Module 1 - Module 6. Module 1 - Module 6 should be comprised of no more than 25 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 7 – Biology of the Skin and Fetal Development). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Complete the Biology of Skin and Fetal Development Test. This is an open book test. Must pass with a minimum score of 90%.

2. Complete the Mideo Biological Aspects of Friction Ridge Formations Test. Must pass with a minimum score of 90%.

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2.8. LP MODULE 8 – SCIENTIFIC METHODOLOGY

GOALS:

To achieve a comprehensive understanding of the scientific methodology used in friction ridge examinations.

To gain an understanding of the basis for the use of fingerprint comparison to develop justifiable conclusions.

To develop knowledge of friction ridge skin characteristics, factors that affect their appearance in regard to properly analyzing a latent impression and to develop an understanding of the relationship between clarity and tolerance levels.

To develop an understanding of the scientific method and how it is applied to friction ridge skin comparison using ACE-V in a consistent manner.

OBJECTIVES:

8.1 Understand the scientific method by which friction ridge examinations are conducted and the basis for all comparative conclusions.

8.2 Understand the qualitative and quantitative aspects of friction ridge examinations.

8.3 Understand the ACE-V methodology, its relationship to the Scientific method, and its application to friction ridge examinations.

8.4 Recognize what is the basis for the use of fingerprint comparisons.

- a. Understand the term uniqueness and how it applies to fingerprint identifications.
- b. Know what it means to individualize versus identify.
- c. Gain a general understanding of statistical information, likelihood ratios and probabilities as it pertains to fingerprints and comparisons.

8.5 To learn to objectively analyze latent prints.

- a. Become familiar with various characteristics in latent impression appearance.
- b. Know the levels of detail which can be present in a latent impression and understand the concept of clarity.
- c. Become familiar with and learn to recognize the factors which affect the latent impression.
- d. Learn to orient and locate impressions made by a finger, palm or finger joint.
- e. To become competent in determining the comparison value of a given latent impression.

8.6 Develop awareness of how the brain affects what is seen and the implications it poses in latent comparison.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. Mideo Lecture / Discussion – Comparison Methodology / ACE-V PowerPoint Presentation
   b. (Mideo) Champod, C. I., *Fingerprints and Other Ridge Skin Impressions,* Chapter 2, 2004
   c. (Mideo) Ashbaugh, D.R., *Quantitative-Qualitative Friction Ridge Analysis,* Chapter 4, Pages 87-136, 1999
   d. (Mideo) National Institute of Justice, *the Fingerprint Sourcebook,* Chapter 9, Sections 9.1-9.3.
   e. (Mideo) Reznicek et al., ACE-V and the Scientific Method, Journal of Forensic Identification, 60(1), 87, 2010

ASSIGNMENTS:

1. Mideo Comparison Methodology / ACE-V Lecture / Discussion

2. Mideo Exercise – Distortion Lecture / Discussion
   a. Practical

3. Write a brief essay which answers the following questions:
   a. What is the Principle of Uniqueness? What information is necessary for uniqueness to be established?
   b. What is the Principle of Individualization?
   c. What is the standard for reaching a conclusion?
   d. Does one difference between two items automatically preclude them from originating from the same source? Explain your answer.
   e. Define the terms individualize and identify. Explain why you would use one or the other to define positive results from fingerprint comparisons. What does our unit use?
   f. What is the basis for friction ridge comparisons / identification?
   g. What is the philosophy of friction ridge comparisons / identification?

4. Determine orientation and location of latent impressions as assigned by a trainer.
   a. Analyze 10 latent impressions.
      i.5 impressions should be from latent lift cards/powder processing.
      ii. 5 impressions should be developed using methods other than black powder
   b. Review and discuss analyses with trainer.

5. Write a brief essay explaining the difference between a forged print and a fabricated print.

6. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 7). Reduce the number of slides for Module 1 - Module 7. Module 1 - Module 7 should be comprised of no more than 35 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 6 – Classification). Keep this

portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

7. Complete the Distortion Exercise.

MODULE TEST:

1. Complete the Mideo Scientific Methodology Test. Must pass with a minimum score of 90%.
2. Complete the Latent Print Analysis Test. This is an open book test. Must pass with a minimum score of 90%.

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2.9. LP MODULE 9 – APPLICATION OF ACE-V

GOAL:

To become proficient at applying ACE-V methodology in order to provide consistently accurate determinations of value/no value, individualization, elimination, and insufficiency of information.

OBJECTIVES:

9.1 Attain the necessary skills and understanding to properly apply the ACE-V methodology and effectively conduct friction ridge examinations through observation and application of specificity, distortions, evaluative weights, target groups, etc.

9.2 Attain the ability to recognize and properly determine, when possible, the area from which the friction ridges originated.

9.3 Attain an understanding of how a comparison is objectively conducted.

9.4 Attain an understanding of the comparative tools that are used to conduct a comparison.

9.5 Understand the types of conclusions that can result from a friction ridge examination.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. Ashbaugh, D.R., Quantitative-Qualitative Friction Ridge Analysis, Chapters 5 and 9, 1999
   b. Champod, C.I., Fingerprints and Other Ridge Skin Impressions, Chapters 5 and 6, 2004
   c. National Institute of Justice, The Fingerprint Sourcebook, Chapter 9, Sections 9.4-9.7
   d. National Institute of Standards and Technology & National Institute of Justice, Latent Print Examination and Human Factors, Chapter 3, 2012
   e. Maceo, A., "Qualitative Assessment of Skin Deformation: A Pilot Study", Journal of Forensic Identification, 59(4), 390, 2009
   f. Langenburg & Champod, "The GYRO System – A Recommended Approach to more Transparent Documentation", Journal of Forensic Identification, 61(4), 373, 2011
   g. Scientific Working Group Friction Ridge Analysis, Study and Technology (SWGFAST), "Document #4 - Guideline for the Articulation of the Decision-Making Process for…"
   h. Michelle Triplet's Fingerprint Terms

ASSIGNMENTS:

1. Complete the 50 friction ridge impressions test. Determine if the impression has value to move forward. If it has value, is it of comparison value or AFIS value. State whether it is a finger, palm or impression. State the orientation or part of the palm you would search the print, being as specific as possible. Once you have completed your assessment, you may be asked to justify your conclusion through documentation. Additional impressions may be reviewed, if the justification doesn't satisfy others in 90% then more training will be provided. For this assignment, the trainee will spend more time learning how to assess prints.

2. Write a brief essay answering the following questions. What is scientific method? Is ACE-V scientific?
3. Mideo Ink-to-ink sets A01-A05 and B01-B05 (Mideo 21 Inked Comparisons and 22 Inked Comparisons).
4. MIDEO TrainingWorks AFIS Exercises A01 and B01 (Mideo 13 AFIS Module and 14 AFIS Module).
5. Review 5 non-hit and 5 hit cases that are from current cases. Review the entire case record. For identification review the comparison. The trainer will select at least 1 individualization per Hit case that you will have to compare and supply supporting documentation. Decide if you would individualize or not and discuss your decisions with your trainer.
6. Mideo Analysis Phase: Digital chart(s) of analysis phase of ACE-V and suitability for A01, B01, C01 and D01 (Mideo ACE-V Analysis Phase Exercise A01, B01, C01 and D01).
7. MIDEO TrainingWorks Comparative Sets A and B.
    a. You will be given a latent and multiple known impressions to compare. Explain your comparison process and conclusions in writing with diagrams if necessary. This should include: your analysis of the impressions; how they were viewed; if they were viewed using imaging software describe what, if any, enhancements were made; where you began your comparison; what direction you moved from your starting point; if you noticed any discrepancies; where you ended; if you looked at every comparable area of detail; etc. Explain both exclusions and identifications. You do not have to explain every exclusion for all fingers compared, but explain why you were able to exclude in writing.
8. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 8). Reduce the number of slides for Module 1 - Module 8. Module 1 - Module 5 should be comprised of no more than 40 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 9 – Application of ACE-V). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Mideo Application of ACE-V Written Test. Must pass with a 90%.
2. Complete the Scientific Method and ACE-V Test. Must pass with a minimum score of 90%.
3. Take two Latent Comparison Proficiency Tests. The trainee will complete the proficiency test in accordance with the current Latent Print Analysis Manual.

REFERENCE:

ACE Latent Print Analysis Worksheet

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2.10. LP MODULE 10 – OPERATIONS AND QUALITY ASSURANCE

GOAL

To achieve a comprehensive understanding of the workflow and documentation needed in the Forensic Services Unit.

OBJECTIVES:

10.1 Attain a comprehensive understanding of the Examination Documentation, Accuracy Standards, Corrective Action and Conflict Resolution policies employed by the FSU.
10.2 Establish a working knowledge of the examination documentation that accompanies all latent print and inked print comparative casework.
10.3 Attain an understanding of the elements that make up the quality systems.
- (a) Training
- (b) Competency and Proficiency Tests
- (c) Certification
- (d) Verification
- (e) Technical and Administrative Reviews
- (f) Quality Systems (Quality manager)

10.4 Attain a basic understanding of the FSU's accrediting body, and the associated compliance elements.
10.5 Attain an understanding of the importance of evidence handling and storage to protect against loss, contamination, or deterioration.

READING ASSIGNMENT:

1. Complete the following reading assignments.
   a. Mideo Lecture / Discussion – Quality Assurance PowerPoint Presentation
   b. National Institute of Justice, *the Fingerprint Sourcebook,* Chapter 12
   c. Latent Print Analysis Manual
   d. Quality Assurance Manual

ASSIGNMENTS:

1. Review the Quality Assurance Manual.

MODULE TEST:

1. Complete the Quality Assurance Test. Must pass with a minimum score of 90%.
2. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 9). Reduce the number of slides for Module 1 - Module 9. Module 1 - Module 9 should be comprised of no more than 50 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 10 – Operations and Quality Assurance). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

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2.11. LP MODULE 11 – RECORDING MAJOR CASE/ELIMINATION PRINTS

GOAL:

To learn the methods for taking high quality exemplars.

OBJECTIVES:

11.1 To learn about the methods used for recording known exemplars.

11.2 To achieve the necessary skills to accurately record known fingerprint exemplars.

11.3 Learn the importance of elimination prints.

READING ASSIGNMENTS:

1. Complete the following reading assignments.
   a. *Crime Scene Investigation, The Forensic Technicians Field Manual* by Tina Young & P.J. Ortmeier
      - Chapter 4 - Physical Evidence Collection and Analysis pg. 349-350
   b. *Scott's Fingerprint Mechanics,* by Robert D. Olsen, Sr.
      - Chapter 2 – Taking Finger, Palm and Footprints pg. 55-101
   c. *The Science of Fingerprint,* by U.S. Department of Justice Federal Bureau of Investigation
      - Chapter 9 – Techniques of Taking Good Fingerprints pg. 111-116
      - Chapter 10 – Problems in Taking Inked Fingerprints pg. 116-129
      - Chapter 11 – Problems and Practices in Fingerprinting the Dead pg. 129-158

ASSIGNMENTS:

1. View a demonstration for obtaining 10-prints and palm print records using black powder and adhesive labels.

2. Take known prints using black powder and adhesive labels. Obtain known prints (10-prints and palms) of at least six individuals. This number can be modified if competence is shown before the sixth set.

3. Review prints obtained with trainer and evaluate for quality. Discuss methods for obtaining the best quality prints.

4. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 10). Reduce the number of slides for Module 1 - Module 10. Module 1 - Module 10 should be comprised of no more than 60 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 11 – Recording Major Case / Elimination Prints). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Complete the Recording Known Standards Test. Must pass with a minimum score of 90%.

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2.12. LP MODULE 12 – INKED IMPRESSION COMPARISON

GOALS:

To gain the ability to conduct inked fingerprint comparisons.

OBJECTIVES:

12.1 Upon successful completion of LP modules 1 – 10, effectively and accurately completed inked print comparisons.

12.2 Qualify the trainee for independent inked print comparative casework (priors, pawn slips, checks, etc.).

12.3 Familiarize the trainee with comparative documentation and the associated note forms, including those in Mideo LatentWorks, that accompany inked comparisons.

READING ASSIGNMENT

1. Two PowerPoint presentations from Mideo (Module 12 AFIS Lecture).
2. Review all previous notes, documents and manuals.

ASSIGNMENT:

1. Complete 15 cases of Inked-Print Comparison Casework. This casework will come from LP Module 2 and LP Module 11.

2. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 11). Reduce the number of slides for Module 1 - Module 11. Module 1 – Module 11 should be comprised of no more than 70 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 12 – Inked Impression Comparison). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Complete the Mideo TrainingWorks Inked Competency Test. Must pass with a score of 100%.

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2.13. LP MODULE 13 - AFIS

GOAL:

To be able to utilize the Automated Fingerprint Identification System (AFIS) databases to run AFIS searches through the multiple databases we have available to our agency.

OBJECTIVES:

13.1 Understand the proper procedure for entering and searching in the available AFIS databases.

13.2 Understand what fields must be filled in, how to register latents and handle Unsolved Latent Databases (ULDB) comparisons.

13.3 Understand the process for retrieving known prints from available databases.

READING ASSIGNMENT

1. No reading assignments. Review all previous notes, documents and manuals.

ASSIGNMENTS:

1. Attend the Universal Latent Workstation Software training, when available.

2. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 12). Reduce the number of slides for Module 1 - Module 12. Module 1 - Module 12 should be comprised of no more than 80 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 13 – AFIS). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Take the local AFIS Competency Exam. The candidate must return in the top 10. Once completed you are signed off to run case work through the available database. This must be completed prior to starting work on cases.

3. Take the IAFIS Competency Exam. The candidate must return in the top 10. Once completed you are signed off to run case work through IAFIS. This must be completed prior to starting work on cases.

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2.14. LP MODULE 14 - DIGITAL IMAGING

GOAL:

To attain basic knowledge of the foundations of digital imaging. Effectively use valid forensic principles to enhance the clarity and contrast of latent print images used in comparisons and for entry into AFIS. Employ digital imaging in the creation of visual aid presentations used to demonstrate casework findings in court. To understand the foundations of digital imaging and valid forensic principles as they relate to latent print examination.

OBJECTIVES:

14.1 The trainee will demonstrate knowledge of the foundations of digital imaging, valid forensic principles, and how they relate to latent print examinations.

14.2 The trainee will demonstrate the ability to correctly recalibrate the size of various digital images for output.

14.3 The trainee will demonstrate the ability to employ the basic tools of Adobe Photoshop in order to perform enhancement techniques on latent print images increasing their clarity and contrast for purpose of comparison and AFIS entry.

14.4 The trainee will demonstrate the ability to employ digital imaging for the purpose of conducting courtroom presentation to explain the examination methodology of a latent print comparison.

2.14.1. FOUNDATIONS OF DIGITAL IMAGING

ASSIGNMENTS:

1. Complete the online tutorial "Digital Imaging Tutorial – *Moving Theory into Practice"*, from Cornell University. http://www.library.cornell.edu/preservation/tutorial/contents.html. When completed, sign the statement of acknowledgement and turn it in to your trainer.

2. Define the attached list of digital imaging terms using online sources.

3. Research the *Association for Information and Image Management (AIIM).* Write a brief paragraph explaining why it is not necessary for our office to comply with their requirements and guidelines in regard to image enhancement.

4. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 13). Reduce the number of slides for Module 1 - Module 13. Module 1 - Module 13 should be comprised of no more than 90 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 14 – Digital Imaging). Keep this portion of the presentation to a maximum of 15 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. Complete the Digital Imaging Test. This is an open source quiz. Must pass with a minimum score of 90%.

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DIGITAL IMAGING TERMS

Administrative Metadata
Aliasing
Anti-aliasing
Artifacts
Bi-tonal image
Bit depth
Bit Depth Support
Bitmap
Burning
CCD
Channel
Clipping
Color image
Compression
DPI
Descriptive Metadata
Digital fidelity
Digital Image
Digitizing
Dithering
Dodging
Dynamic range
Effective resolution
Effective Pixels
FTP
Gamma Correction
Grayscale image
Histogram
Interpolation
JPEG
Largest digital print rule
Lossless compression
Lossy compression
Megapixel Multiplier rule
Metadata
Original Image
PPI
Pixel
Pixelization
Primary Image
Raw file
Resolution
Scaling
TIF
White balance

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2.14.2. IMAGE CALIBRATION

ASSIGNMENTS:

1. Complete a practical assignment: calibrate and print several images at different size ratios.

   Digital Assignment 1:

   a. Use 4 digital images with a scale included in the image.

   b. Open all four in Photoshop

   c. Calibrate all four images to 1:1 ratio

   d. Make image #3 a 5x enlargement

   e. Place all 4 calibrated images on one (or 2 if necessary) blank sheet(s)

   f. Print

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2.14.3. ENHANCEMENT OF CLARITY AND CONTRAST

ASSIGNMENTS:

1. Complete a practical assignment demonstrating the ability to enhance both clarity and contrast of a variety of different visualized latent prints. Focus on the use of forensically valid techniques.

   Digital Assignment 2:

   a. Use 4 digital images of latent prints

   b. Open all 4 in Photoshop

   c. Change the preferences in Photoshop to create a History Log

      1. Under the Edit Menu, select "Preferences" (at the bottom of the drop down menu) and click on "General"
      2. Check the "History Log" box
      3. Click on "Text File" and choose a location to save your log
      4. Select "Detailed" from the edit log items drop down menu
      5. Click "OK"

   d. Using forensically valid techniques, adjust all images as necessary for greatest clarity of detail

   e. Resize images so that they can be easily viewed on an 8x10 page

   f. On a blank sheet place the original images and enhanced images side-by-side

   g. Print all the side-by-side images (in color on regular paper) as well as copy of the history log

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2.14.4. CHARTED ENLARGEMENTS

ASSIGNMENTS:

1. Complete a practical assignment demonstrating the ability to enhance the clarity and contrast of a visualized latent print using forensically valid techniques. Calibrate the image and create a charted enlargement of the visualized latent and corresponding known image for court presentation.

2. Demonstrate your ability to present an identification using Adobe Photoshop to your trainer. Use layers to show level 1 details, level 2 details, level 3 details, red flags, and other observable consistencies and dissimilarities between a latent print and a known print. Although this method of demonstrating an identification can be done using Power Point, for this assignment it will only be necessary to demonstrate this on your desk computer.

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2.15. LP MODULE 15 – LATENT PRINT SUPERVISED CASEWORK

GOALS:

To gain the ability to conduct latent print comparisons.

OBJECTIVES:

15.1 Apply learned methods and techniques in practical form by performing latent comparative casework via exercises and casework under the supervision of a trainer.

15.2 The trainee will receive supervised comparative casework in the following formats:
   a. Mideo TrainingWorks Comparative Set C;
   b. Mideo TrainingWorks Comparative Set D;
   c. Manual Comparison cases – known subject(s) (20 cases).

15.3 The trainee will be under the direction of a trainer – both will report directly to the Forensic Services Supervisor or the Lieutenant overseeing FSU in all matters regarding the supervised casework.

READING ASSIGNMENT

1. No reading assignments. Review all previous notes, documents and manuals.

ASSIGNMENTS:

1. Mideo TrainingWorks Comparative Set C;
2. Mideo TrainingWorks Comparative Set D
3. 20 Escondido Forensic Services Cases
4. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 14). Reduce the number of slides for Module 1 - Module 14. Module 1 - Module 14 should be comprised of no more than 100 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 15 – Latent Print Supervised Casework). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

MODULE TEST:

1. A latent print comparative competency test will be given upon successful completion of the supervised comparative exercises and manual comparative cases. Must pass with a minimum score of 90%.

2. Complete the Mideo Latent Print Training Program Final Test. Must pass with a minimum score of a 90%.

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2.16. MODULE 16 – TESTIMONY TRAINING

GOAL:

To assess that the Specialist has the ability to articulate proper evidence handling, chain of custody, laboratory procedures, examination methodology, and other findings according to established courtroom and legal protocols and our current SOPs.

This goal will be accomplished by participating in a simulated mock trial/moot court. This will involve case scenarios which address specific aspects of latent print examination. There will be a panel of senior Specialists who will witness the testimony and critique it. The trainee will be evaluated on presentation and information given.

OBJECTIVES:

16.1 The trainee will present truthful, technically accurate, understandable and believable testimony in a mock trial environment. The trainee will follow all established protocols for expert witnesses.
16.2 The trainee will demonstrate the ability to describe evidence handling, chain of custody, laboratory procedure and other findings.
16.3 The trainee will develop or update a CV and be able to answer questions regarding this document.

READING ASSIGNMENTS:

a. (Mideo) National Institute of Justice, *The Fingerprint Sourcebook*, Chapter 13
b. (Mideo) Wertheim, P.A., Qualifying as an Expert Fingerprint Witness: Designing a Set of Questions to Assist in Court Testimony, Journal of Forensic Identification, 40(2), 61, 1990
c. (Mideo) National Academy of Sciences, *Strengthening Forensic Science in the US*, pages 1–53, 136–145
d. (Mideo) National Academy of Sciences, *Strengthening Forensic Science in the US* Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), International Association for Identification and Laboratory Services Bureau position statements
e. (Mideo) Speckels, C., Commentary: Can ACE-V Be Validated?, Journal of Forensic Identification, 61(3), 201, 2011
f. (Mideo) Landmark Court Decisions - Summary Series
g. (Mideo) Notable Errors (Erroneous Identifications, Exclusions and Fabrications) – Summary Series
h. (Mideo) Current court challenges:
    i. ACE-V validation
    ii. Blind verification
    iii. Office of Scientific Area Committees – Friction Ridge Subcommittee standards (conformance or lack of)
    iv. Error rates
    v. Bias/Human Factors
i. (Mideo) Critics – Summary Series

2.16.1. MOOT COURT

ASSIGNMENTS:

1. Create or update a curriculum vitae and have it approved.

2. Organize/prep case file materials
   a. Briefcase
   b. Review all case file materials thoroughly
   c. Know forms/acronyms
   d. Know the address of lab and crime scene
   e. Know the order in which the chemicals were used
   f. Review the number of latents of value vs. those of no value
   g. Review the number of lift cards and scans
   h. Review your report

3. Know/Prepare for the following:
   a. Attire (dress appropriately – neat and clean clothing/business attire, no flashy jewelry/watches, no visible tattoos)
   b. National standards: (Know who or what these groups are and the names of their publications.
      vii. SWGFAST
      viii. IAI
      ix. FBI
      x. FQS, FQSI ASCLD, or ASCLD/Lab and CTS
      xi. NAS
      xii. Certification & Proficiency Testing
   c. Know basic fingerprint history
   d. Be able to explain ACE-V AND Ridgeology
   e. Anatomy/Biology/Formation of Friction Ridge Skin (Review Section 4: Biology of the Skin and Fetal Development)
   f. Be able to explain constituents of latent print residue
   g. Be able to explain latent print recovery factors
      vi. Matrix (skin substance)
      vii. Substrate (surface)
      viii. Deposition Distortion / Pressure Distortion
      ix. Environmental Factors
      x. Development Medium

4. Present testimony in Moot Court:

The following are possible scenarios:

a. It will involve receiving one lift card. The trainee will be able to explain chain of evidence, the ACE-V methodology and the methodology employed in the latent print recovery.

b. It will involve processing 2 items: a piece of paper with a developed print of comparison value, but not AFIS value, and a firearm with no visible friction ridge detail; and receiving a lift card from the field with no value for comparison. The trainee will be able to explain chain of evidence, the ACE-V methodology and the methodology employed in the latent print recovery.

c. It will be an AFIS "hit" case: there will be processing of 2 items: a piece of paper with a developed AFIS quality latent, and a firearm with no visible friction ridge detail, as well as a crime scene where a print of AFIS value was preserved. The trainee will be able to explain chain of evidence, the ACE-V methodology and the methodology employed in the latent print recovery and crime scene procedures.

d. Using the evidence from #3 above, the trainee will answer unscripted questions. They will be evaluated on their presentation and overall ability to convey information in easily understood terms. If possible, the panel will be people that do not work as latent print Specialists.

5. PowerPoint – Continue to build on the PowerPoint created in the previous Modules (Module 1 - Module 15). Reduce the number of slides for Module 1 - Module 15. Module 1 - Module 15 should be comprised of no more than 110 slides. Follow the previous Module slides with a detailed PowerPoint on the current module (LP Module 16 – Testimony). Keep this portion of the presentation to a maximum of 20 slides. Upon completion of the PowerPoint, a maximum 10-minute presentation will be presented.

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2.17. OTHER TRAINING (Optional)

1. Compile the following definitions to keep for future reference:
    a. Federal Rules of Evidence
    b. #702
    c. #703
    d. #705
    e. #1001
    f. #1002
    g. #1003
    h. #1005
    i. Frye
    j. Daubert Case
    k. Daubert Criteria

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2.18. RECOMMENDED CLASSES

- Finding Latent Evidence with Chemistry & Light
- Friction Ridge Expert Witness Testimony Techniques
- Courtroom Testimony Techniques - Success Instead of Survival
- Basic Forensic Digital Imaging
- Field Evidence Technician Course-CSU-Long Beach
- Fingerprint and Trace Evidence Detection on Skin
- Confirmation bias, Ethics, and Mistakes in Forensic Science
- Digital Forensic Photography
- Scientific Analysis: From the laboratory to the Witness Stand
- Attend the Universal Latent Workstation Software training, when available.

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REVISION HISTORY

Refer to the QA11 Document Control for revision information.

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