History Page

The original version of the Latent Print Examiner Training Manual was accepted July 10, 2000.

Revision 1, was revised from revision 0, and was effective May 1, 2001.

Revision 2, was revised from revision 1, and is effective December 1, 2006.

Revision 3, was revised from revision 2, and is effective February 4, 2008.

Revision 4: Changes made to, Introduction, Sections 1 & 6, Revision 4 is effective April 16, 2010.

Revision 5: Complete Training Manual revision, Revision 5 is effective August 17, 2010.

Revision 6: Changes made to; 1.3.1; 1.4; 1.4.1; 1.5; 1.6; 2.4.1; 3.4.1; 4.4; 5.4.1; 6.5.1; 7.4.1; 8.4.1; 9.3.1; 9.4.1; 10.4.1; 11.5; 11.5.4; 11.5.5; 12.1.2.3; 12.3.3; 12.3.3.1; 12.4.1.2; 12.4.2.7; 12.4.3.1.7; 12.4.4.1.8; 12.4.5.1.4; 12.4.6.1.17; 12.4.7.1.1; 12.4.7.1.11; 12.4.7.1.2; 12.4.8.1.17; 12.4.9.1.12; 12.4.10.1.12; 12.4.11.1.6; 12.4.12.1.10; 13.2.8; 13.3.1; 14.2.2; 14.2.4; 14.4.1; 15.5.1; 16.2.2; 16.2.3; 16.3; 17.2.1; 17.4.1; 18; 18.6.1; 18.2.6, Revision 6 is effective March 21, 2011.
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Overview of Training Program

A. All new latent print examiners will be assigned to qualified latent print examiner(s) who will act as their trainer(s).

B. Trainees must pass written tests and/or practical exercises on required objectives. All tests are closed book unless otherwise noted.

C. The duration of training is 1 1/2 to 2 years depending upon the progress of the examiner and their demonstrated aptitude and ability. Training blocks may be completed in any order. Trainees with previous training and experience will be evaluated against all training criteria to determine which standards have been met and areas that may require additional training.

D. During the training phase the trainee should attend workshops and/or training classes in the areas of latent print processing, latent print comparison, crime scene processing, courtroom testimony, digital imaging, and photography. Training on additional topics may be attended as approved. Attendance of outside training courses/workshops is subject to course availability and budget constraints. Requests for training shall be approved through the chain of command. A list of recommended latent print training courses may be found in Appendix “B” of this training manual.

E. All cases processed and examinations performed during training will be with the trainee working as “the hands of the trainer” as defined by the ISPFS Quality/Procedure Manual.

F. Reading is an ongoing process during the training phase and shall include books, articles, and journals held in the Latent Section Library. A list of required reading for each training block is listed along with a signoff for the completion of each task. A list of additional recommended reading for latent examiners may be found in Appendix “A” of the training manual.

G. During training, the trainee shall accompany their coach and other trained latent examiners on field case processing. Allowing the trainee to accompany more than one latent print examiner will afford them the opportunity to learn the various techniques that each examiner utilizes and to develop their own style of crime scene processing. The trainee’s coach and the program supervisor shall determine the point at which the trainee is able to work field cases on their own.

H. The trainee shall satisfactorily complete competency tests in the areas of digital imaging, AFIS, latent print processing, and latent print comparisons.

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I. The trainee may accompany other examiners to court to gain exposure to expert testimony on latent prints during the training period.

J. The trainee shall participate as an expert witness in a moot court prepared by other latent print examiners to gain exposure to latent print testimony. In the event that the trainee has previous testimony experience that experience shall be evaluated to ensure that all training criteria have been met.

K. Any latent print training classes that are taught by FS personnel during the training phase shall be observed by the trainee. After attending these classes, the trainee may be required to assist or teach some segments of the training classes.

L. The trainee shall keep a record of all experience obtained during the training phase. This shall include time spent working with inked prints, classes attended, classes instructed, court testimony observed or performed (including moot), field cases observed or worked, # of comparisons, # of identifications effected, # of AFIS comparisons & identifications, # of cases processed, and special projects completed during the training phase. These statistics will be a valuable aid for future court testimony.

M. It is encouraged that the trainee make application to become a member of the International Association for Identification (IAI) and the Pacific Northwest Division of IAI. A list of professional associations and certifications may be found in Appendix “C” of this Training Manual.

N. This training manual does not preclude the coach from adding other pertinent topics as may be applicable and/or related to the science of friction ridge analysis, forensic science, and the criminal justice system. However, additional courses or topics must be approved by the Latent Program Supervisor prior to instruction or incorporation within the program.

O. Training blocks may be segmented as necessary for optimal student understanding of the subjects and concepts presented. Field trips are authorized to enhance courses under current study. Training blocks may be supplemented by additional required readings, group discussion, independent and direct study, practical exercise, or research (or any combination thereof).
Laboratory Introduction

1.1 Objectives:
1.1.1 Orientation to the Idaho State Police Forensic Services (FS).

1.1.2 Understanding of the organization structure, chain of command, and policies/procedures for FS.

1.1.3 Understanding of laboratory security and the need for confidentiality.

1.1.4 Understanding of the quality assurance/quality control guidelines for FS.

1.1.5 Understanding of the safety guidelines for FS.

1.1.6 Knowledge of the potential explosion, fire, and contamination safety hazards associated with latent print development powders, solvents and chemicals.

1.1.7 Understanding of the professional duties moral obligations, and code of ethics for forensic Scientists.

1.2 Required Reading: Trainee / Completion Date
1.2.1 Idaho State Police Employee Handbook. ____________/_________

1.2.2 Idaho State Police Forensic Services (ISPFS) Quality/Procedure Manual. ____________/_________

1.2.3 ISPFS Health and Safety Manual. ____________/_________

1.2.4 Latent Print Section Analytical Method (AM). ____________/_________

1.2.5 Safety for the Forensic Identification Specialist Nancy E. Masters - 2nd Edition. ____________/_________

1.3 Lecture:

1.3.1 The analyst shall complete an approved Ethics training course. The online Ethics training course sponsored by West Virginia University is the current approved course. A change to the currently approved ethics course must be approved by the Major/Manager.

Course Completed: ______________________________________

Date: ________________ Attach copy of certificate
1.4 Unit Exams: Supervisor / Date / P or F
1.4.1 Module 1: Competency Test

1.4.2 ISPFS Health & Safety Manual Exam (open book)

1.4.3 ISPFS Quality/Procedure Manual Exam (open book)

1.5 Tetanus/Hep Vaccination
Completion or Declination: Trainee / Completion Date

1.6 Sign Off of Module 1:
Supervisor / Completion Date

2 Evidence Handling

2.1 Objectives:
2.1.1 Understanding of the case/evidence acceptance policy and evidence receiving procedures.

2.1.2 Understanding of evidence packaging and chain of custody.

2.1.3 Understanding of evidence handling, prevention of contamination, and documentation.

2.1.4 Understanding of, and the ability to demonstrate proper procedures for handling and marking physical evidence received for examination.

2.1.5 Understanding of proper procedures for packaging physical evidence for subsequent latent print examination without reducing its evidentiary value.

2.2 Required Reading: Trainee / Completion Date
2.2.1 ISPFS Quality/Procedure Manual Sect. 5.8 Handling Items of Evidence

____________________ / ___________
2.2.2 Latent Print Section AM Section 5. ____________/__________

2.2.4 Physical Evidence collection Manual (ISP website) ____________/__________

2.3 Training Exercises: Trainee / Completion Date

2.3.1 Evidence packaging lecture: formal training class or self led power point. ____________/__________

2.3.2 Trainer Led Introduction to Evidence Procedures: (Sign-in/out, packaging, storage)

Examiner Trainer

Date:__________

2.4 Unit Exam: Supervisor / Date / P or F

2.4.1 Module 2: Competency Test _______/_______/________

2.5 Sign Off of Module 2: Supervisor / Completion Date 

_____________/________

3 History and Background of Fingerprint Identification

3.1 Objectives:

3.1.1 Understanding of early methods of personal identification (Bertillon system, photography, scars, tattoos, sight recognition, marks, and mutilations).

3.1.2 Understanding of the earliest recorded awareness of fingerprints (cliff dwellers-Chinese).

3.1.3 Understanding of early anatomical observations (Grew, Malpighi, Purkinje, et. Al.) and have an understanding of the biological significance of friction skin ridge patterns and their formation.

3.1.4 Understanding of the scientific observations and use of fingerprints leading to modern fingerprint identification (Herschel, Faulds, Galton, Vucetich, and Henry).
3.1.5 Understanding of the chronology of the introduction and use of fingerprints in the United States (Thompson, Twain, DeForest, Ferrier, NY Prison System, U.S. Navy and Army, FBI).

3.1.6 Understanding of the current criminal and civil applications of fingerprints, palm prints, and footprints and how these applications developed in the United States.

3.1.7 Understanding of the existence and development of various criminal and civil fingerprint files (FBI, U.S. military medical records, state and local fingerprint and palm print repositories).

3.2 Required Reading: Trainee / Completion Date


3.2.3 Criminalistics, 9th edition by Richard Saferstein. Chapter 14, “History of Fingerprints.” Pages 428-430. ____________/_________

3.2.4 Advances in Fingerprint Technology 2nd edition, by Lee, Gaensslen. Chapter 1, “History and Development of Fingerprinting.” Pages 1-40. ____________/_________

3.2.5 Friction Ridge Skin, by James F Cowger, Chapter 1, pages 1-7. ____________/_________

3.2.6 Fingerprints and The Law, by Andre A. Moenssens. Chapter 1, “History Perspective.” Pages 1-9. ____________/_________

3.2.8 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 1: History. Available on line from the USDOJ

3.2.9 Fingerprints and the Law
By Andre A. Moenssens
Chapters 7 “Fingerprint Evidence in Criminal Cases”
Chapter 8 “Fingerprints in Non-Criminal Cases” Pages 108-147

3.3 Practical Exercise:
3.3.1 Write a short synopsis of the contributions of each of the following figures:
Hershel, Faulds, Galton, Vucetich & Henry

3.4 Unit Exams:
3.4.1 Module 3:
Competency Test

3.5 Sign Off of Module 3:

4 Biology and Physiology of Friction Ridge Skin

4.1 Objectives:
4.1.1 Understand the biology and physiology of friction ridge skin.
4.1.2 Understanding of the basic foundations of the science of friction ridge identification (persistence and uniqueness).
4.1.3 Understanding of the basic anatomy and terminology of the hands and feet.
4.1.4 Understanding of the general chemical composition of human perspiration as a means of understanding the composition of latent print residue.

4.1.5 Knowledge of genetic abnormalities of friction ridge skin (e.g. dysplasia, copal patterns, dissociated ridges).

4.1.6 Knowledge of alteration and mutilation of friction ridge skin.

4.2 Required Readings: Trainee / Completion Date

4.2.1 Scott’s Fingerprint Mechanics, by Robert D. Olsen, Sr. Chapter 1, “Fingerprint Identification.” Pages 5-14, 24-30.


4.2.4 Criminalistics, 9th edition by Richard Saferstein. Chapter 14, “Fingerprints.”

4.2.5 Forensic Science an Introduction to Criminalistics, by Deforest, Gaensslen, & Lee. Chapter 12, “Fingerprints and Other Patterns for Personal Identification” Pages 330 -358.


4.2.7 Fingerprints and Other Friction Ridge Skin Impression by Christophe Champod et. Al. Chapter 1 “Friction Ridge Skin” Pages 1-13

4.2.8 Paper – “The Critical Stage of Friction Ridge Skin and Pattern Formation” by Kasey Wertheim and Alice Maceo


4.2.12 Paper – “Permanent Intentional Fingerprint Mutilation” Kasey Wertheim


4.3 Practical Exercise:
4.3.1 Find and read two articles (published within the past 7 years) on the biology and physiology of friction Ridge skin

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4.3.2 Present a short synopsis of the papers you read to the latent section

Supervisor / Completion Date

4.4 Unit Exam:
Module 4:
Competency Test
Supervisor / Date / P or F

4.5 Sign Off of Module 4:
Supervisor / Completion Date
5 Friction Ridge Pattern Recognition and Interpretation

5.1 Objectives:
5.1.1 Understanding of common terminology and definitions associated with friction ridge pattern recognition (arch, loop, and whorl).

5.1.2 Understanding of pattern recognition.

5.1.3 Awareness and understanding of the Henry Classification System to include:
   5.1.3.1 Origin
   5.1.3.2 FBI extensions
   5.1.3.3 Pattern interpretation
   5.1.3.4 Parts of classification

5.1.4 Awareness and understanding of other classification systems (NCIC Classification System, American System, and the Vucetich System)

5.1.5 Understanding of friction ridge formations as they relate to recognition, interpretation, and identification.

5.2 Required Reading 
Trainee / Completion Date
5.2.1 The Science of Fingerprints, by the FBI. Chapters 2-8. Pages 5-110. \[Filled\]
5.2.2 Friction Ridge Skin, by James F. Cowger. Chapter 3, “Classification.” Pages 35-70. \[Filled\]
5.2.3 Fingerprint Techniques, by Andre A. Moenssens. Chapter 3, “Pattern Interpretation.” Pages 64-101. \[Filled\]
5.2.4 Fingerprint Techniques, by Andre A. Moenssens. Chapter 6, “Fingerprint Classification in the United States.” Pages 158-173. \[Filled\]
5.2.5 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr., Chapter 1, Sections 7, 8, and 9, “Fingerprint Classification,” “Space Value on Fingerprint Cards,” “Fingerprint Patterns are Complex Yet Simple.”


5.2.8 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 5: Systems of fingerprint classification. Available online from the USDOJ.

5.3 Practical Exercise
5.3.1 Fingerprint Classification Exercise
Classify three fingerprint cards for both Primary Henry and NCIC.

5.4 Unit Exam: Module 5: Competency Test

5.5 Sign Off of Module 5:

6 Automated Fingerprint Identification System (AFIS)

6.1 Objectives:
6.1.1 Understanding of automation technology and theory of operation to include:
6.1.1.1 The history of the development of friction ridge automation technology.
6.1.1.2 The theory of the operation of friction ridge automation technology to include distortion when three-dimensional friction ridge skin is captured in a two-dimensional image.

6.1.2 Understanding of the function and use of image capture to include:
6.1.2.1 Types of friction ridge recordings (e.g. rolled, flat, simultaneous, palm).
6.1.2.2 Methods of friction ridge capture (e.g. ink, live scan).
6.1.2.3 Types of capture devices (e.g. live-scan, flatbed, camera).
6.1.2.4 Point of capture variables (e.g. condition of fingers, condition of platen, rolling speed, movement).
6.1.2.5 Control measures needed to achieve quality friction ridge images (e.g. scan resolution, compression rate, equipment maintenance, calibration).
6.1.2.6 Procedures for addressing amputations, temporary injuries, skin conditions, and rescans.

6.1.3 Understanding of the function and use of Automated Fingerprint Identification Systems (AFIS) to include:
6.1.3.1 AFIS process related to acquisition, classification, searching, storage, retrieval, identification, and final reporting of friction ridge records.
6.1.3.2 Friction ridge search criteria (e.g. designated finger search, how many fingers, palm areas).
6.1.3.3 Importance of quality assurance on maintaining the integrity of friction ridge data.
6.1.3.4 Quality controls that ensure completeness, image quality, and data integrity.

6.1.4 Gain a working knowledge of the NEC Automated Fingerprint Identification System (AFIS) Global Workstation – Latent (GWS-L) and the Integrated Automated Fingerprint Identification System (IAFIS) to include:
6.1.4.1 Who handles component maintenance and calibration.
6.1.4.2 System requirements and limitations including text data fields, fingerprint and palm print quality, finger sequence and image replacement, image rotation, and toleration for pattern interpretation.
6.1.4.3 Minutia recognition, placement, rotation, ridge counts, and other minutiae factors related to searching and matching.
6.1.4.4 Limitations of system interoperability.
6.1.4.5 Integration of friction ridge image, mug shot, scars, marks, tattoos, minutiae, other biometrics, as well as personal descriptors, and criminal history information.

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6.1.4.6 Search parameters, pattern classification and referencing, minutiae extraction, search algorithms, significance in the range of candidate scores, threshold scoring, and candidate list comparisons, matching.

6.1.4.7 AFIS search capabilities in regards to latent print vs. ten print, ten print vs. latent print, latent print vs. latent print, ten print vs. ten print, and palm print vs. palm print.

6.1.4.8 “Lights out” processing of searches (i.e. mobile search capabilities).

6.1.4.9 Logical search progression (i.e. state, regional, national).

6.1.4.10 Filtering criteria used to establish logical candidates (e.g. finger position, sex, classification, race, offense, geographic location).

6.1.4.11 Search result contents (e.g. ranked order, unique identifier, finger or palm position).

6.1.4.12 Differences between AFIS digital images and original friction ridge impressions (e.g. potential loss of quality due to compression of image, monitor resolution, capture resolution).

6.1.4.13 Printer technology limitations vs. examinations from original friction ridge documents (e.g. paper quality, inked fingerprint cards).

6.1.4.14 AFIS processes related to latent print searches.

6.1.4.15 Various search options among databases within the system (e.g. image, feature).

6.1.4.16 Manual and automatic encoding of minutiae.

6.1.4.17 File penetration benefits and liabilities of partial vs. full database searches.

6.1.4.18 Record authentication processes (e.g. correct association of name, unique identifier, friction ridge images, and criminal history record).

6.2 Required Reading: Trainee / Completion Date

6.2.1 Scott’s Fingerprint Mechanics
Robert D. Olsen Sr. Chapter 8, Section 111
“Computer Identification of Latent Fingerprints”
Pages 355-357.

6.2.2 Criminalistics, 9th edition
Richard Saferstein,
Chapter 14, “AFIS” Pages 436-438.

6.2.3 Advances in Fingerprint Technology
2nd edition Lee, Gaensslen,
Chapter 8, AFIS” Pages 275-321.
### 6.2.4 NEC User Guides

| 6.2.4.1 | GWS–NSW | ____________/_________ |
| 6.2.4.2 | GWS-L | ____________/_________ |
| 6.2.4.3 | GWS-L Quick Reference Guide | ____________/_________ |
| 6.2.4.4 | GWS-L Update Difference Quick Reference Guide | ____________/_________ |
| 6.2.4.5 | NEC ELMA Best Practices | ____________/_________ |


### 6.3 Lecture:

#### 6.3.1 The analyst shall complete an approved AFIS training course. The on-line AFIS training course sponsored by West Virginia University is the current approved course. If a previously approved course becomes unavailable, the Latent Section Supervisor will choose or design a new course that meets the training module requirements.

- **Course Completed:** ______________________________________
- **Date:** ________________
- Attach copy of certificate

### 6.4 Practical Exercise:

#### 6.4.1 Each analyst will complete the following searches with a trained AFIS operator:

| 6.4.1.1 | 20 latent searches covering all applicable ELMA algorithms. |
| 6.4.1.2 | 10 IAFIS latent searches |

Search documentation will be maintained on AFIS search worksheets. Copies of all worksheets will be attached for documentation purposes.

### 6.5 Unit Exams / Competency Test:

| 6.5.1 Module 6: Competency Test | Reviewer / Date / P or F |
| ____________/_________ /_________ |
6.5.2 AFIS Competency Test: The analyst will independently search 5 mock latent prints through the Automated Fingerprint Identification System. Competency test prints may consist of palm prints, low minutia prints, distorted prints, and non-matching prints.

6.5.3 The analyst shall generate a list of AFIS related court qualifying questions and provide sample answers to those questions that could be presented in a court of law.

6.6 Sign Off of Module 6: Supervisor / Completion Date

7 Recording Inked Fingerprints, Palm Prints, and Footprints

7.1 Objectives:

7.1.1 Understanding of the various methods for recording known friction ridges for criminal history or personal identification including:

7.1.1.1 Introductory knowledge of chemical (inkless) systems for recording friction ridges.

7.1.1.2 Introductory knowledge of recording friction ridge detail using printer’s ink.

7.1.1.3 Introductory knowledge of recording friction ridge detail using the black powder/adhesive lift (Handiprint) method.

7.1.1.4 Introductory knowledge of electronic capture systems (Live Scan) for recording friction ridges.

7.1.2 Understanding of the quality of friction ridge detail produced by each method.

7.1.3 Understanding of the benefits associated with obtaining victim/elimination prints and complete friction ridge exemplars (major case prints).

7.1.4 Understanding of the proper method of completing fingerprint and palm print card information, sequence for recording fingers, and method of printing plain impressions.

7.1.5 Demonstrate ability to properly use ink and roller to record fingerprints, palm prints, and footprints (including equipment maintenance).

7.1.6 Demonstrate ability to properly record complete friction ridge exemplars (major case prints).
7.2 Required Reading


7.2.6 Latent Print Section AM Sections 9.7

7.2.7 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 4: Recording Living and Postmortem Friction Ridge Skin Exemplars. Available on line from the USDOJ

7.3 Practical Exercise

7.3.1 Rolling Inked Prints

7.3.2 Taking Major Case Prints
   (including foot prints)

7.3.3 Black Powder Adhesive Lift Method

Trainee / Completion Date

_______/_______

_______/_______

_______/_______

_______/_______
7.3.4 Familiarity with live scan terminal and production of a live scan fingerprint card

7.4 Unit Exam:
7.4.1 Module 7:
  Competency Test

7.5 Sign Off of Module 7:

8 Recording Post-mortem Exemplars

8.1 Objectives:
8.1.1 Understanding of the procedures and equipment used in fingerprinting deceased persons.

8.1.2 Understanding of the effects and conditions of rigor mortis and stages of decomposition.

8.1.3 Understanding of the legal considerations and procedures for the removal of fingers or hands and subsequent preservation.

8.1.4 Understanding of the disaster squad services available from the FBI, Latent Fingerprint Section.

8.1.5 Understanding of equipment maintenance and personal safety considerations involving body fluid contamination, accidental puncture from needles, etc.

8.2 Required Reading


8.2.2 The Science of Fingerprints, FBI, Chapter 11, “Problems and Practices in Fingerprinting the Dead.” Pages 129-156.
8.2.3 Fingerprint Techniques, by Andre A. Moenssens. Chapter 5, “Postmortem Fingerprinting.” Pages 145-150.  

8.2.4 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr. Chapter 2, Section 30, “Postmortem Fingerprinting.” Pages 84-89.  

8.2.5 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 4: Recording Living and Postmortem Friction Ridge Skin Exemplars. Available on line from the USDOJ.  


8.2.8 Paper – “Obtaining Fingerprint and Palm print Impressions for Decomposed Bodies or Burn Victims Using the Mikrosil Casting Method.” JFI, Vol. 55, No. 4, 2005.  

8.3 Practical Exercises:  

8.3.1 Taking prints using post mortem spoon (mock exercise)  

8.3.2 Injecting post mortem prints (mock exercise)  

8.3.4 Assist with post mortem prints in the lab or at autopsy  

Trainer / Date / P or F  

Case # / Trainer / Date  

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Uncontrolled Internet Copy
8.4 Unit Exam: Supervisor / Date / P or F
8.4.1 Module 8: Competency Test

8.5 Sign Off of Module 8: Supervisor / Completion Date

9 Sections and Services of a Forensic Laboratory

9.1 Objectives:
9.1.1 Understanding of other forensic disciplines to include: shoeprint/tire track, firearms/tool marks, fire debris, drug chemistry, biological screening, DNA, toxicology, breath alcohol, trace evidence, and physical match.

9.1.2 Understanding of the capabilities, basic operating procedures, and manner in which latent print procedures interface with:
10.1.2.1 Forensic Document Examination
10.1.2.2 Firearms and Tool marks
10.1.2.3 Chemistry/Toxicology
10.1.2.4 Biology/DNA
10.1.2.5 Microanalysis/Trace Evidence
10.1.2.6 Shoe print/tire track

9.1.3 Understanding of the potential for loss, contamination, and destruction of other types of forensic evidence (indented hand writing, body fluids, etc.) when more than one discipline is to process the same item of evidence. An ability to preserve other types of forensic evidence when processing for latent prints.

9.1.4 Understanding of the proper procedures for completing forms, correspondence, and packaging of evidence to be forwarded to national or regional laboratories.

9.2 Required Reading:
9.2.1 Criminalistics, 9th edition
Richard Saferstein,
Chapter 1 “Introduction” pgs. 2-25
9.2.2 Criminalistics, 9th edition
Richard Saferstein,
Chapter 8 “Hairs, Fibers, and Paint” pgs. 208-239 / __________


9.2.4 Criminalistics, by Richard Saferstein.
Chapter 13, “DNA”.

9.2.5 Death Investigation Handbook by Louis N. Eliopulos
Chapter 67 “Forensic Odontology
Pages 679 – 693.

9.2.6 Criminalistics, 9th edition
Richard Saferstein,
Chapter 15, “Firearms, Tool Marks, and Other Impressions”
Pages 458-495.

9.2.7 Criminalistics, 9th edition
Richard Saferstein,
Chapter 9, “Drugs”
Pages 246-277.

9.2.8 Criminalistics, 9th edition
Richard Saferstein,
Chapter 10, “Forensic Toxicology”
Pages 278-309.

9.2.9 Criminalistics, 9th edition
Richard Saferstein,
Chapter 16, “Document and Voice Examination”
Pages 496-521.

9.2.10 Criminalistics, 9th edition
Richard Saferstein,
Chapter 11, “Forensic Aspects of Arson and Explosion Investigations”
Pages 310-342.
9.3 Practical Exercises:

9.3.1 Practical exercises to other Forensic disciplines may be obtained through reading, observation, online training and/or coursework:

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<td>9.3.1.7 Firearms/Tool Marks</td>
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<td>9.3.1.8 Fire Debris</td>
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<td>9.3.1.9 Toxicology</td>
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9.4 Unit Exam:  
9.4.1 Module 9: Competency Test  
Supervisor / Date / P or F  
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9.5 Sign Off of Module 9:  
Supervisor / Completion Date  
______/__________

10 Introduction to Latent Prints and Crime Scenes

10.1 Objectives:  
10.1.1 General knowledge of the science of fingerprints to include processing, comparison and crime scenes.
10.1.2 Understanding of the services offered by the Latent Print Section including evidence processing, comparison, post mortem/elimination fingerprinting, AFIS, and clan lab/crime scene response.

10.1.3 Understand the documentation requirements for latent print processing both in the lab and at scenes.

10.1.4 An understanding of the professional duties, moral obligations, and code of ethics for Latent Print Examiners.

10.1.5 An understanding of the personal safety hazards posed by blood borne pathogens (AIDS virus, hepatitis, etc.) present on body fluid contaminated evidence that is to be processed for latent prints. Knowledge shall include proper work area disinfection, procedures for handling needles and sharps, and use of personal protective equipment, clothing, gloves, etc.

10.1.6 Introductory knowledge of various crime scene search techniques, including commonly prescribed searching sequences (grid, spiral, strip, etc.).

10.2 Required Reading Trainee / Completion Date

10.2.1 The Science of Fingerprints, by FBI. Chapter 13, “Latent Impressions.” Pages 170-172. ________/__________

10.2.2 Friction Ridge Skin, by James F. Cowger. Chapter 4, “The Evidence Print.” Pages 71-109. ____________/________

10.2.3 Criminalistics, by Richard Saferstein. Chapter 14, “Fingerprints.” Pages 408-413. ____________/________

10.2.4 Fingerprint Techniques, by Andre A. Moenssens. Chapter 4, "Latent Prints." Pages 102-106. ____________/________


10.2.6 Forensic Science an Introduction to

10.2.7 Latent Print Section AM Section 12

10.2.8 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 10: Documentation of Friction Ridge Impressions From the Scene to the Conclusion. Available online from the USDOJ

10.2.9 SWIGFAST Standard For The Documentation of Analysis, Comparison, Evaluation, and Verification (ACE-V) (Latent)

10.2.10 ASCLD/LAB Appendix A

10.3 Practical Exercise:

10.3.1 Locate and read the “Code of Ethics and Standards of Professional Conduct” for latent print examiners as published by the IAI.

Trainee / Completion Date

10.3.2 Proper marking of evidence Trainer / Date / P or F

10.4 Unit Exam:

10.4.1 Module 10: Competency Test

10.5 Sign Off of Module 10: Supervisor / Completion Date

Rev. 6
Issued 3-21-2011
Issuing Authority: Quality Manager
Training Manual Latent Section
Page 27 of 62
11 Analysis, Comparison, Evaluation, and Verification (ACE-V)

11.1 Objectives:

11.1.1 Understanding of scientific methodology and its application to friction ridge examination, and the ability to analyze fragmented friction ridge detail to determine its value (comparison/identification, value/no value).

11.1.2 Understanding of friction ridge characteristics (dots, ridge endings, and bifurcations) the varying definitions/interpretations assigned to combinations of those three ridge characteristics, and how they may be utilized in effecting identification.

11.1.3 Understanding of the value of incipient ridge characteristics for use in latent print comparison/individualization.

11.1.4 Understanding of the importance of elimination prints and the necessity for completing "elimination" comparisons before AFIS processing of latent prints.

11.1.5 Ability to recognize and utilize ridge flow configurations (size, pattern, focal points, etc.), scars, creases, and other friction ridge characteristics to support latent print examination.

11.1.6 Ability to recognize, and if possible determine the area from which the latent fingerprints, palm prints, and foot/toe prints originated.

11.1.7 Understanding of the nature of color reversals (entire print) and changes (within the same print) and the ability to properly analyze these occurrences when they are encountered in latent print comparisons.

11.1.8 Understanding of the effects of pressure distortion, slippage, overlays, pre- and post- deposit artifacts (surface scratches, soil, brush strokes, etc.), and the ability to properly analyze such disturbances/distortion.

11.1.9 Understanding that different policies and standards exist regarding what constitutes friction ridge individualization in the U.S. and other countries and why no minimum "number" of matching ridge characteristics can be defined to effect an identification (i.e., positive opinion based on personal empirical experience in examining and comparing latent prints).

11.1.10 Ability to recognize simultaneous (cluster) impressions and an understanding of their value for identification.
11.1.11 Ability to analyze friction ridge details to determine the value for comparison.

11.1.12 Demonstrate the ability to properly conduct a comparison.

11.1.13 Understanding of what constitutes a valid identification and the ability to render an accurate conclusion.

11.1.14 Understanding of the necessity for verification by another qualified latent print examiner.

11.1.15 Understand the role of quality assurance measures in friction ridge examination.

11.1.16 Awareness of the impact(s) resulting from an erroneous conclusion.

11.1.17 Have an awareness of basic statistical models and the potential for their integration into the current friction ridge identification procedures

11.2 Required Reading


11.2.2 Friction Ridge Skin, by James F. Cowger. Pages 129-206.

11.2.3 Finger Prints, Palms and Soles, by Harold Cummins and Charles Midlo.

11.2.4 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr. Pages 5-46, 171-175.

11.2.5 Fingerprint Techniques, by Andre A. Moenssens. Pages 27-63, 86-88, 252-293, 294-301.

11.2.6 Advances in Fingerprint Technology, by Lee & Gaensslen. Pages 39-56.

Trainee / Completion Date

____________/__________
11.2.7 Demystifying Palm Prints
packet, by Ron Smith.

11.2.8 Latent Print Section AM Section 12.

11.2.9 Fingerprints and Other Ridge Skin Impressions
By, Champod, Lennard, Margot, Stoilovic
Pages 21-28.

11.2.10 Paper – “Detection of Forged and
Fabricated Latent Prints” Pat A. Wertheim,
JFI Vol. 44, No. 6. 1994

11.2.11 Paper – “The Ability Equation” Pat A. Wertheim

11.2.12 Paper – “Forensic Individualization of
Images Using Quality and Quantity of
Information.” John Vanderkolk, JFI,

JFI Vol. 60 No.1, 2010

11.2.14 Paper – “Scientific Comparison and Identification
of Fingerprint Evidence.” Pat, Wertheim.

11.2.15 Paper – “Distortion Versus Dissimilarity in
Friction Skin Identification.” William Leo.

11.2.16 Paper – “A Performance Study of the
ACE-V Process: A Pilot Study to Measure
the Accuracy, Precision, Reproducibility,
Repeatability, and Biasability of Conclusions
Resulting from the ACE-V Process.” JFI, Vol.

11.2.17 Paper - “Incipient Ridges and the Clarity
Spectrum” David R. Ashbaugh. JFI Vol.42.
No. 2 1992


11.2.20 Paper – “Palmar Flexion Crease Identification”
David R. Ashbaugh Identification Canada
Jan/Feb/March 1992 ____________/__________


11.3 Lecture:
11.3.1 The analyst shall complete an approved Latent Print Comparison Techniques training course. The course shall be a minimum of 40 hours.

Course Completed: ____________________________________________________________________

Date: ________________
Attach copy of certificate

11.3.2 The analyst shall complete an approved Advanced Ridgeology/Complex Comparison Course training course. The course shall be a minimum of 40 hours.

Course Completed: ____________________________________________________________________

Date: ________________
Attach copy of certificate

11.3.3 The analyst shall complete an approved Palm Print training course. The course shall be a minimum of 20 hours.

Course Completed: ____________________________________________________________________

Date: ________________
Attach copy of certificate
11.4 Practical Exercises

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<th>Examiner</th>
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Proficiency tests

Complete 10

Name of Test | Date Completed
-------------|-----------------|

Examiner:

“48 comparisons”

Coach:

11.5 Unit Exam/Competency Tests:

11.5.1 Evaluation of Latent Prints evaluate a set of 100 latent prints as to their value

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Supervisor / Date / P or F

11.5.2 Classify 50 latent prints into categories of origin (specific fingers if possible, specific areas of palm or foot print)

Supervisor / Date / P or F

11.5.3 Comparison Competency Test

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11.5.4 Complete at least 20 supervised comparison cases (may be adjusted by the Discipline leader for an experienced examiner).

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11.5.5 Module 11:

Competency Test

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11.6 Sign Off of Module 11:

Supervisor / Completion Date

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12 Latent Print Processing

12.1 Alternate Light Source (ALS) Detection of Latent Prints

12.1.1 Objectives:

12.1.1.1 Understanding of the personal safety hazards associated with Alternate Light Sources (ALS) and other non-destructive methods of latent print development.
12.1.1.2 Understanding of dye stain procedures used for post-cyanoacrylate ALS processing.

12.1.1.3 Understanding of chemical enhancement procedures used for post-ninhydrin ALS processing.

12.1.1.4 Understanding of equipment maintenance relative to ALS detection of latent prints.

12.1.1.5 Knowledge of luminescence, fluorescence, inherent luminescence, light wavelengths, band-pass filters, and light delivery systems as they relate to ALS detection of latent prints.

12.1.2 Required Reading

12.1.2.1 Friction Ridge Skin, by James F. Cowger. Pages 106-107. ___________/__________

12.1.2.2 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr., Pages 185-187, 229-231, 347-348. ___________/__________

12.1.2.3 Advances in Fingerprint Technology, Lee & Gaensslen. Pages 135-159. ___________/__________

12.1.2.4 An Introduction to Lasers, Forensic Lights, and Fluorescent Fingerprint Detection Techniques, by A. Roland Menzel. ___________/__________

12.1.2.5 Latent Print Section AM Section 8.1. ___________/__________

12.1.2.6 Criminalistics, by Richard Saferstein. Chapter 14, Pages 440-441. ____________/__________

12.1.2.7 Applicable ALS User Manuals ____________/__________

12.1.2.8 Krimesite Imager User’s Manual/Video. ____________/__________

12.1.3 Practical Exercises

12.1.3.1 Alternate Light Source Examination
12.2 Powder Development of Latent Prints

12.2.1 Objectives:
12.2.1.1 Understanding of the basic types of brushes and their composition.
12.2.1.2 Understanding of surfaces and environmental factors determining brush type, powder type, and color selection.
12.2.1.3 Understanding of the proper procedures for using different types of hair, fiberglass, and magnetic brushes.
12.2.1.4 Understanding of equipment maintenance and safety procedures relative to powder development of latent prints.
12.2.1.5 Knowledge of lifting tape, gel lifters, hinge lifters, etc.

12.2.2 Required Reading: Trainee / Completion Date

12.2.2.1 The Science of Fingerprinting, by FBI. Chapter 14, “Powdering and Lifting Latent Impressions.” Pages 173-174

12.2.2.2 Friction Ridge Skin, by James F. Cowger. Chapter 4, “The Evidence Print.” Pages 78-85.


12.2.2.5 Scott’s Fingerprint Mechanics, by Robert A. Olsen, Sr. Chapter 5, “Latent Finger-
print Powder Techniques.”
Pages 209-235

12.2.2.6 Fingerprint and the Law, by Andre A. Moenssens. Chapter 2, Page 24.

12.2.2.7 Techniques of Crime Scene Investigation, 5th edition.

12.2.2.8 Latent Print Section AM
Sections 9.3 & 9.4.

12.2.2.9 Recovery of Latent Prints from Human Skin From the JFI, Vol. 55, No. 3, 2005


12.2.3 Practical Exercises:

12.2.3.1 Trainer led orientation of powder processing Trainer / Date (Standard, magnetic, Bi-chromatic, and fluorescent)

12.2.3.2 Lifting Trainer led orientation of lifting techniques
Various tapes (clear, frosted, 3-M) Mikrosil & Accutrans, Gel and hinge lifts, casting mediums, gel lifts, etc.

12.2.3.3 Processing Bodies for Latent prints (mock exercise)

12.2.3.4 Latent Fingerprint Processing/Chemical Techniques 40 hrs.

12.3 General Chemical Development of Latent Prints

12.3.1 Objectives:
12.3.1.1 Understanding of safety hazards associated with each of the chemicals used for development of latent prints in the ISP FS Latent Section. Knowledge shall include proper disposal, spill procedures/equipment, and the use of personal protective equipment.

12.3.1.2 Understanding of latent print residue components targeted by different chemical development procedures.

12.3.1.3 Understanding of effects of various solvents on evidence surfaces (inks, plastics, varnishes, etc).

12.3.1.4 Understanding of surface and environmental factors effecting selection and sequencing of chemical development procedures.

12.3.1.5 Understanding of chemical storage, application and development Procedures for:
   12.3.1.5.1 Amido Black
   12.3.1.5.2 DFO
   12.3.1.5.3 Gentian Violet/Crystal Violet
   12.3.1.5.4 Iodine Fuming
   12.3.1.5.5 Ninhydrin
   12.3.1.5.6 Physical Developer
   12.3.1.5.7 Dye Stain Solutions (Rhodamine 6G, Ardrox, RAM)
   12.3.1.5.8 Small Particle Reagent
   12.3.1.5.9 Sticky-Side Powder
   12.3.1.5.10 Sudan Black
   12.3.1.5.11 Cyanoacrylate Fuming
   12.3.1.5.12 Leucocystal Violet (LCV)

12.3.1.6 Understanding of equipment maintenance relative to chemical development of latent prints.

12.3.2 Required Reading Trainee / Completion Date

12.3.2.1 Manual of Fingerprint Development Techniques, by Home Office Police Science Development Branch, London. ___________/__________

12.3.2.2 The Science of Fingerprints, FBI. Chapter 15, “Chemical Development of Latent Impressions.” Pages 175-186. ___________/__________

12.3.2.3 Fingerprints and the Law, by Andre A.
12.3.2.4 Fingerprint Techniques, by Andre A. Moenssens. Chapter 4. Pages 114-126.


12.3.3 Practical Exercises/ Competency Test

Supervisor / Completion Date

12.3.3.1 Complete at least 20 supervised comparison cases (may be adjusted by the Discipline leader for an experienced examiner).

_______/_______/_______

12.4 Specific Chemical Techniques

12.4.1 Amido Black

12.4.1.1 Required Reading

Trainee / Completion Date


_______/_______


_______/_______

12.4.1.1.3 Paper – “Summary of Experiments Investigating the Impact of Fingerprint Processing and Fingerprint Reagents on PCR-based DNA Typing Profiles.”

_______/_______

12.4.1.1.4 Paper – “Chemical Enhancement of Fingerprints in Blood: An Evaluation of Methods, Effects on DNA, and Assessment of Chemical Hazards.”

_______/_______


_______/_______
12.4.1.1.6  Paper – Presumptive Testing for Blood on a Patent Print Developed with Amido Black.


12.4.1.1.9  Latent Print Section AM
Section 10.1.

12.4.1.2  Practical Exercises
Locate and Read MSDS-Amido Black

Mixing of Amido Black

Amido Black Application, Competency Examination, and Preservation

12.4.2  DFO

12.4.2.1  Required Reading

12.4.2.1 Paper – “The Effectiveness of 1,2-Indandione-Zinc Formulations and Comparison with HFE-Based 1,8-diazafluoren-9-one for Fingerprint Development.” JFI Vol. 59, No. 6, 2009.

12.4.2.3 Latent Print Section AM Section 10.3.

12.4.2.4 Fingerprints and Other Ridge Skin Impressions by, Champod, Lennard, Margot, and Stoilovic Pages 128-131.

12.4.2.5 Locate and Read MSDS-DFO

12.4.2.6 Mixing of Chemical

12.4.2.7 Application, Competency Examination, and Preservation

12.4.3 Gentian Violet/Crystal Violet

12.4.3.1 Required Reading

12.4.3.1.1 Advances in Fingerprint Technology by Lee, Gaensslen Pages 70, 86, 88-89, 154.

12.4.3.1.2 Paper – “Development of Latent Fingerprints on Sticky Surfaces by Dye Staining or Fluorescent Brightening.”

12.4.3.1.3 Latent Print Section AM Section 10.4.

12.4.3.1.4 Fingerprints and Other Ridge Skin Impressions by, Champod, Lennard, Margot, and Stoilovic Page 160

12.4.3.1.5 Locate and Read MSDS-Gentian Violet
12.4.4.1 Required Reading  
Trainee / Completion Date

12.4.4.1.1. The Science of Fingerprints, FBI.  
“Iodine Method.” Pages 175-177.  

12.4.4.1.2 Advances in Fingerprint Technology, by Lee, Gaensslen.  
Pages 60, 65-67, 89.  

12.4.4.1.3 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr.  
Pages 243-256.  

12.4.4.1.4 Friction Ridge Skin, by James F. Cowger. Pages 93-96.  

12.4.4.1.5 Latent Print Section AM Section 9.2.  

Trainer / Date / P or F

12.4.4.1.6 Locate and Read MSDS-Iodine  

12.4.4.1.7 Iodine chamber  

12.4.4.1.8 Competency Examination and Preservation  

12.4.5 Leuco Crystal Violet

12.4.5.1 Required Reading  
Trainee / Completion Date


12.4.5.1.2 Locate and Read MSDS-LCV       _____/_____ /_______
12.4.5.1.3 Mixing LCV                       _____/_____ /_______
12.4.5.1.4 Application, Competency Examination, and Preservation
                                                _____/_____ /_______

12.4.6 Ninhydrin

12.4.6.1 Required Reading

12.4.6.1.1 The Science of Fingerprints, by FBI.
   “Ninhydrin Method.” Pages 177-179.          _____/_______

12.4.6.1.2 Advances in Fingerprint Technology,
   by Lee & Gaensslen. “Fingerprint Development by Ninhydrin and its
   Analogues.” Pages 104-127, 156.           _____/_______

12.4.6.1.3 Scott's Fingerprint Mechanics, by
   Robert D. Olsen Sr. Pages 273, 276-291.  _____/_______

12.4.6.1.4 Friction Ridge Skin, by James F.
   Cowger. Pages 96-98.                       _____/_______

12.4.6.1.5 Paper – “Procedure to Develop Latent Prints on Thermal Paper”
                                                               _____/_______

12.4.6.1.6 Paper – “Latent Fingerprints by a Superior Ninhydrin Method”
                                                               _____/_______

12.4.6.1.7 Paper – “Ninhydrin Processing by Pat A. Wertheim”
                                                               _____/_______
12.4.6.1.8 Paper - “The Effectiveness of Ninhydrin Latent Prints Verses Physical Developer Latent Prints, with Regards to Climatic Conditions at the Time of Deposition.” __________/_________


12.4.6.1.11 Paper – “Advanced Solvent-Free Application of Ninhydrin for Detection of Latent Fingerprints on Thermal paper and Other Surfaces.” __________/__________


12.4.6.1.13 Latent Print Section AM Section 10.5. __________/__________

12.4.6.1.14 Fingerprints and Other Ridge Skin Impressions by, Champod, Lennard, Margot, and Stoilovic Pages 115-128. __________/__________

Trainer / Date / P or F

12.4.6.1.15 Locate and Read MSDS-Ninhydrin ______/______/______

12.4.6.1.16 Mixing of Chemical ______/______/______

12.4.6.1.17 Application, Competency Examination, and Preservation ______/______/______

12.4.7 Physical Developer

12.4.7.1 Required Reading Trainee / Completion Date

12.4.7.1.1 Chemical Formulas and Processing
Guide for Developing Latent Prints, by FBI. Pages 32 - 34. 

12.4.7.1.2 Advances in Fingerprint Technology, by Lee, Gaensslen. Pages 79-82

12.4.7.1.3 Paper – “Physical Developer” by David Burow

12.4.7.1.4 Paper – “Physical Developer: A Practical and Productive Latent Print Developer.”

12.4.7.1.5 Paper – “PD, Maleic Acid and Synperonic N.”


12.4.7.1.7 Latent Print Section AM Section 10.6.

12.4.7.1.8 Fingerprints and Other Ridge Skin Impressions by, Champod, Lennard, Margot, and Stoilovic Pages 131-133.

12.4.7.1.9 Locate and Read MSDS-PD

12.4.7.1.10 Mixing of Chemical

12.4.7.1.11 Application, Competency Examination, and Preservation

12.4.8 Dye Stain Solutions

12.4.8.1 Required Reading

Trainer / Date / P or F
12.4.8.1.2 Latent Section AM Section 10.7.

_________ / __________

12.4.8.1.3 Fingerprints and Other Ridge Skin Impressions
by, Champod, Lennard, Margot, and Stoilovic
Pages 142-145.

_________ / __________

Trainer / Date / P or F

12.4.8.1.4 Locate and Read MSDS-R6g

_____ / _______/ _________

12.4.8.1.5 Mixing of Chemical (water base)

_____ / _______/ _________

12.4.8.1.6 Mixing of Chemical (methanol base)

_____ / _______/ _________

12.4.8.1.7 Application, Competency Examination, and Preservation

________ / _______ / _______

12.4.9 Small Particle Reagent

12.4.9.1 Required Reading

Trainee / Completion Date

12.4.9.1.2 Advances in Fingerprint Technology 1st Edition
by Lee & Gaensslen, Pages 82-83.

_________ / __________

12.4.9.1.3 Paper - "Lightning Powder Co. Technical Note Small Particle Reagent"

_________ / __________

12.4.9.1.4 Paper - "Small Particle Reagent" by Pat A. Wertheim

_________ / __________

12.4.9.1.5 Paper - "Report of Validation Testing" Sirchie SPR-W by Albuquerque Police

_________ / __________


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12.4.9.1.7 Latent Print Section AM Section 9.5. ___________/___________

12.4.9.1.8 Fingerprints and Other Ridge Skin Impressions
by, Champod, Lennard, Margot, and Stoilovic Pages 138, 162.

Property of Idaho State Police Forensic Services
12.4.9.1.9 Locate and Read MSDS sheets for both Traditional and white SPR
   _______/_________/_________

12.4.9.1.10 Mixing of traditional SPR
   _______/_________/_________

12.4.9.1.11 Application, Examination, and Preservation of traditional SPR
   _______/_________/_________

12.4.9.1.12 Application, Competency Examination, and Preservation of white SPR
   _______/_________/_________

12.4.10 Sticky-Side Powder

12.4.10.1 Required Reading
   ___________/_________

12.4.10.1.2 Paper – “Homemade Solution for Processing latent Prints on the Adhesive Side of Tape.”
   ___________/_________

12.4.10.1.3 Paper - “A Black Powder method to Process Adhesive Tapes.”
   ___________/_________

12.4.10.1.4 Paper – “Anomalous Results with Sticky Side Powder.”
   ___________/_________

12.4.10.1.5 Paper – “Adhesive Tape Separation with UN-DU.”
   ___________/_________

12.4.10.1.6 Paper – “The Use of Un-du to Separate Adhesive Materials.”
   ___________/_________

12.4.10.1.7 Paper – “Does CA Fuming Interfere with Powder Suspension Processing?”
   ___________/_________
12.4.10.1.8 Latent Section AM Section 9.6. __________/__________

12.4.10.1.9 Fingerprints and Other Ridge Skin Impressions by, Champod, Lennard, Margot, and Stoilovic Pages 161-162. __________/__________

Trainer / Date / P or F

12.4.10.1.10 Locate and Read MSDS-Sticky Side Powder ____/_____/________

12.4.10.1.11 Mixing of Chemical ____/_____/________

12.4.10.1.12 Application, Competency Examination, and Preservation ____/_____/________

12.4.11 Sudan Black

12.4.11.1 Required Reading Trainee / Completion Date

12.4.11.1.1 Advances in Fingerprint Technology, by Lee & Gaensslen. Page 37. __________/__________

12.4.11.1.2 Friction Ridge Skin, by James F. Cowger. “Locating, Developing, Preserving, and Collecting Evidence Prints.” Page 104. __________/__________

12.4.11.1.3 Latent Section AM Section 10.8. __________/__________

Trainer / Date / P or F

12.4.11.1.4 Locate and Read MSDS-Sudan Black ____/_____/________

12.4.11.1.5 Mixing of Chemical ____/_____/________

12.4.11.1.6 Application, Competency Examination, and Preservation ____/_____/________

12.4.12 Super-Glue (Cyanoacrylate Fuming)

12.4.12.1 Required Reading Trainee / Completion Date

Property of Idaho State Police Forensic Services
Uncontrolled Internet Copy
12.4.12.1.1 Advances in Fingerprint Technology
by Lee & Gaensslen. Pages 37, 67-70. __________/_________

__________/________

12.4.12.1.3 Paper – “Fivis by 3M – Instructions and Notes”
____________________

12.4.12.1.4 Paper – “Effects of Cyanoacrylate Processing on Cocaine HCL Trace Analysis”
__________/________

12.4.12.1.5 Latent Section AM Sections 10.2. __________/________

12.4.12.1.6 Locate and Read MSDS-CAE _______/________/________

12.4.12.1.7 Application of CAE (Chamber method)
________/________/________

12.4.12.1.8 Application of CAE (Fuming wand)______/_______/________

12.4.12.1.9 Application of CAE (Vacuum Chamber)
______/_______/________

12.4.12.1.10 Competency Examination and Preservation
_____/_______/________

13 Other Scientific Personal Identification Methods

13.1 Objectives

13.1.1 Understanding of other than friction ridge identification (handwriting, DNA, facial recognition, Iris Scanning, & Odontology).

13.2 Required Reading
13.2.1 Biometrics Overview  

13.2.2 Iris Recognition  http://www.biometrics.gov/Documents/IrisRec.pdf

13.2.3 Face Recognition  http://www.biometrics.gov/Documents/FaceRec.pdf

13.2.4 Vascular Pattern Recognition  

13.2.5 Hand Geometry  

13.2.6 Forensic Science: An introduction to Criminalistics  
“Questioned Document Examination” Pages 366 – 370

13.2.7 Forensic Science Handbook Volume 1 2nd Edition  
Richard Saferstein Pages 710-717

13.2.8 Techniques of Crime Scene Investigation 6th edition  
Barry A.J. Fisher Pages 123 - 130

13.3 Unit Exam:  
13.3.1 Competency Test  
Supervisor / Date / P or F  
_________/_____/_______

13.4 Sign off Module 13  
Supervisor / Date / P or F  
_________/_____/_______

14 Photography of Latent Prints

14.1 Objectives  
14.1.1 Understanding of latent print photography to include:

14.1.1.2 Equipment and Materials  
14.1.1.2.1 Different types of cameras used for latent print photography.
14.1.1.2.2 Film vs. digital
14.1.1.2.3 Filters
14.1.1.2.4 Lighting techniques
14.1.1.2.5 Use and maintenance of cameras and other photography equipment

14.1.2 Photographic Procedures
14.1.2.1 Adjusting for Exposure settings including aperture and shutter speed
14.1.2.2 Use of lenses and knowledge of film speed.
14.1.2.3 Use of scales.

14.1.3 Photography of chemically developed latent prints of various colors.
14.1.4 Photography of latent prints developed with powders.

14.1.5 Photography of patent and plastic prints (in blood, paint, putty or wax, etc.).
14.1.6 Fluorescent photographic techniques
   - Use of filters
   - Use of dye stains.

14.2 Required Reading

14.2.1 Advances in Fingerprint Technology, by Lee & Gaensslen. Pages 63, 93.
   ___________/_________

   ___________/_________

   ___________/_________

14.2.4 Friction Ridge Skin, by James F. Cowger. Pages 76-78, 111-128, 85-88, 90-93.
   ___________/_________

14.2.5 Police Photography, by Larry S. Miller.
   ___________/_________

   ___________/_________

14.2.7 Latent Print Section AM Sections 6.
   ___________/_________

14.2.8 Forensic Science An Introduction to Criminalistics, by DeForest, Gaensslen & Lee Appendix 3.
14.2.9 Close-up & Macro Photography
For Evidence Technicians.

14.2.10 The Police Photographer’s Guide by James A McDonald

14.3 Practical Photography exercise.
14.3.1 Camera settings
14.3.2 Macro Photography
14.3.3 Crime scene Photography
14.3.4 Black and White Film Development

14.4 Unit Exam:
Module 14: Competency Test

14.5 Sign Off of Module 14:

15 Digital Imaging

15.1 Objectives
15.1.1 Understanding of the capabilities and limitations of specific technologies
that relate to digital imaging and storage of latent and inked prints.
15.1.2 Understanding of the proper procedures for camera capture and digital
scanning of latent and inked print images.
15.1.3 Understanding of digital enhancement techniques using Adobe Photoshop
or other like programs to improve the quality of latent print images.
15.1.3.1 Color reversal
15.1.3.2 Position reversal
15.1.3.3 Enlargements
15.1.3.4 Use of layers
15.1.3.5 Image contrast
15.1.3.6 Image calibration/resolution
15.1.3.7 Use of digital filters

15.1.4 Working knowledge of the current digital imaging system.

15.2 Required Reading

<table>
<thead>
<tr>
<th>Required Reading</th>
<th>Trainee / Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.2.1 Police Photography, by Larry S. Mille Digital Cameras, Pages 132-138.</td>
<td></td>
</tr>
<tr>
<td>15.2.3 Techniques of Crime Scene Investigation, by Barry A. J. Fisher Page 112.</td>
<td></td>
</tr>
<tr>
<td>15.2.4 Advances in Fingerprint Technology, 2nd edition by Lee &amp; Gaensslen. Page 267.</td>
<td></td>
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<tr>
<td>15.2.6 FORAY User Manual Forensic Image Tracking System and Updates.</td>
<td></td>
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<tr>
<td>15.2.7 Latent Print Section AM Section 11.</td>
<td></td>
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<tr>
<td>15.2.8 ISPFS Latent Section Digital Imaging Users Manual.</td>
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<tr>
<td>15.2.9 Review Current Adobe Photoshop Users Manual.</td>
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<tr>
<td>15.2.10 Read SWGDE guidelines</td>
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</tr>
</tbody>
</table>

15.3 Lecture:

15.3.1 Latent Fingerprint Photography  40 - 80 hrs.

15.3.2 Digital Imaging Workshop  40 hrs.

15.4 Practical Exercises

15.4.1 Digital Acquisition Devices
(Flatbed scanner, negative scanner, and digital camera(s))

15.4.2 Digital Image Enhancement

15.5 Unit Exams / Competency Test:

15.5.1 Module 15: Competency Test

15.5.2 Competency test on Digital Imaging System. The analyst will independently capture, calibrate, enhance, and document latent prints.

15.6 Sign Off of Module 15:

16 Evaluation and Comparison of Friction ridge Impressions

16.1 Objectives
16.1.1 Understand the individual friction ridge structure (e.g., continuity, texture, pore, and edge definition) for determining the existence of individualizing details
16.1.2 Ability to analyze friction ridge details to determine the value for comparison

16.1.3 Ability to recognize and utilize friction ridge flow, scars, creases, and other friction ridge details for supporting the examination

16.1.4 Ability to recognize and properly determine, when possible, the area from which the friction ridges originated

16.1.5 Knowledge of how to properly analyze friction ridge impressions and understand effects such as processing technique, color reversal, pressure distortion, slippage, and overlays

16.1.6 Ability to properly conduct a comparison

16.1.7 Ability to render a proper and accurate conclusion

16.1.8 Understand the practice and purpose of verification by another competent friction ridge examiner

16.1.9 Understand the role of quality assurance measures in friction ridge examination

16.1.10 Knowledge of various methods used to record known friction ridge impressions and the ability to properly evaluate ridge structure based on each method

16.1.11 Knowledge of alteration and mutilation of friction ridge skin

16.1.12 Knowledge of genetic abnormalities of friction ridge skin (e.g., dysplasia, cuspal patterns, dissociated ridges)

16.1.13 Knowledge of the benefits associated with obtaining elimination prints and complete friction ridge exemplars

16.1.14 Knowledge of simultaneous or adjacent friction ridge impressions and their value for examination

16.1.15 Awareness that different policies and standards exist in the United States and other countries regarding friction ridge identification (individualization)

16.1.16 Awareness of the impact(s) resulting from an erroneous conclusion

16.2 Required Readings

16.2.1 Friction Ridge Skin, by James F. Cowger.
16.2.2 Scott’s Fingerprint Mechanics, by Robert D. Olsen Sr. Pages 5-46,

16.2.3 Fingerprint Techniques, by Andre A. Moenssens. Pages 27-63, 86-88, 252-293, 294-301.

16.2.4 Advances in Fingerprint Technology, by Lee & Gaensslen. Pages 39-56.

16.2.5 Latent Print Section AM Section 12.

16.2.6 Paper- Fingerprints What They Can & Cannot Do! By Allan McRoberts “The Print” Vol. 10(6), June 1994 Pages 1-3

16.3 Practical Exercises / Competency Test: Examiner /Trainer

16.3.1 Latent print evaluation exercise.
   16.3.1.1 Patterns
   16.3.1.2 Print orientation
   16.3.1.3 Difficult prints

17 Latent Print Section Case Management and Reporting

17.1 Objectives
   17.1.1 An understanding of and the ability to demonstrate proper procedures for maintaining chain of custody (documentation and physical control).

   17.1.2 Understanding of and the ability to demonstrate proper procedures for case file (note taking) recording of activities. Documentation shall be such that another qualified Latent Print Examiner could evaluate what was done and replicate any comparisons.
17.1.3 Understanding of and the ability to demonstrate proper procedures for reporting latent print examination findings in an accurate, concise, and clear manner.

17.1.4 Ability to navigate and query the various databases needed for report writing and location of criminal history records.

17.2 Required Reading

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Trainee / Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.2.1 Quality Manual 5.3 Accommodations and Environmental Conditions</td>
<td></td>
</tr>
<tr>
<td>17.2.2 Idaho State Police Forensic Services Quality Manual 5.8 Handling Items of Evidence</td>
<td></td>
</tr>
<tr>
<td>17.2.3 Idaho State Police Forensic Services Quality Manual 5.9.4 Technical Review &amp; 5.9.5 Administrative Review</td>
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<tr>
<td>17.2.4 Idaho State Police Forensic Services Quality Manual 5.10 Reporting the Results</td>
<td></td>
</tr>
<tr>
<td>17.2.5 Latent Section AM Section 14</td>
<td></td>
</tr>
<tr>
<td>17.2.6 The Fingerprint Sourcebook by Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), et al. Chapter 12: Quality Assurance. Available on line from the USDOJ</td>
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</tr>
</tbody>
</table>

17.3 Practical Exercises:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Trainer / Date / P or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.3.1 Introduction to Report Writing Drop Downs</td>
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<tr>
<td>17.3.2 Evidence Tracking System (ETS) Orientation</td>
<td></td>
</tr>
<tr>
<td>17.3.3 Writing Reports</td>
<td></td>
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<tr>
<td>17.3.4 Accessing Chain of Custody</td>
<td></td>
</tr>
</tbody>
</table>
17.3.5 Entering Stats

17.4 Lecture:

Basic ILETS Class
Course Name______________________________
Exam (P/F) Date

Course/Instructor:____________________
Instructor:____________________

17.4 Unit Exams / Competency Tests:

17.4.1 Module 17:
Competency Test

17.5 Trainee shall independently produce X3 processing case reports

Case #_______________________
_______________________
_______________________

17.6 Trainee shall independently produce 3 comparison case reports

Case #_______________________
_______________________
_______________________

18 Court Procedures, Related Laws, Expert Testimony, applicable Criminal and Civil Procedures

18.1 Objectives

18.1.1 Understand the role of expert witness testimony

18.1.2 Knowledge of factors regarding the admissibility of evidence

18.1.3 Knowledge of relevant court cases and case histories

18.1.4 Understand the rules of discovery and evidence

18.1.5 Knowledge of applicable legal challenges to admissibility

18.1.6 Understand critical challenges to the discipline
18.1.7 An understanding of court exhibit preparation procedures to include:

18.1.8 Charting types/methods (points, area bubbles, power point)

18.1.8.1 Use of the digital imaging system to develop court charts
18.1.8.2 Print selection
18.1.8.3 Selection of individual ridge characteristics for charting

<table>
<thead>
<tr>
<th>Required Reading</th>
<th>Trainee / Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.2.1 Friction Ridge Skin, by James F. Cowger. Pages 207-210.</td>
<td>/</td>
</tr>
<tr>
<td>18.2.2 Fingerprint Techniques, by Andre A. Moenssens. Pages 270-280.</td>
<td>/</td>
</tr>
<tr>
<td>18.2.3. Advances in Fingerprint Technology, by Lee &amp; Gaensslen. Pages 242-264.</td>
<td>/</td>
</tr>
<tr>
<td>18.2.4 Fingerprints And The Law, by Andre A. Moenssens, Chapter 3-11. Pages 31-219.</td>
<td>/</td>
</tr>
<tr>
<td>18.2.5 Effective Expert Witnessing, by Jack V. Matson.</td>
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<tr>
<td>18.2.6 Law for the Expert Witness, by Daniel A. Bronstein. <em>(Book covers general law procedures)</em></td>
<td>/</td>
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<tr>
<td>18.2.7 Paper “The Authority of Fingerprint Experts: Is it Based on Belief or Science?” JFI, Vol. 56, No. 6, 2009.</td>
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<tr>
<td>18.2.8 Paper – “Why Experts Make Errors.” Vol. 56, No. 4, 2006</td>
<td>/</td>
</tr>
</tbody>
</table>

18.2.12. Advances in Fingerprint Technology

18.2.13 Executive Summary Strengthening Forensic Science in the United States: A Path Forward By the Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council. Available on line.

18.3 Practical Exercises

18.3.1 Preparation of Court Exhibits

18.3.2 Preparation of Curriculum Vitae

18.3.3 Preparation of Qualifying Questions

18.4 Lecture: Expert Testimony

18.5 Practical Exercise:
Write a 3-5 page paper on recent court developments as they relate to fingerprints

18.5.1 Write one to two paragraphs for each of the following court cases outlining the arguments/decision/and impact of each on the Science of Friction Ridge Analysis.

18.5.1.1 Daubert v. Merrel Dow Pharmaceuticals

18.5.1.2 US v. Byron Mitchell

18.5.1.3 US v. Llera Plaza

18.5.1.4 Mayfield v. United States

18.5.2 Processing Moot Court

18.5.3 Comparison Moot Court
18.6 Unit Exam: [Supervisor / Date / P or F]

18.6.1 Module 18: Competency Test

[_____/_____/______]

18.7 Sign Off of Module 18: [Supervisor / Completion Date]

[____________/_________]
19 Student Progress Record

<table>
<thead>
<tr>
<th>Training Sections</th>
<th>Date / Initials of Reviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Laboratory Introduction</td>
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<tr>
<td>2 Evidence Handling</td>
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<tr>
<td>3 History and Background of Fingerprint Identification</td>
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<tr>
<td>4 Biology and Physiology of Friction Ridge Skin</td>
<td></td>
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<tr>
<td>5 Friction Ridge Pattern Recognition and Interpretation</td>
<td></td>
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<tr>
<td>6 Automated Fingerprint Identification System (AFIS)</td>
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<tr>
<td>7 Recording Inked Fingerprints, Palm Prints, and Footprints</td>
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<tr>
<td>8 Recording Post-mortem Exemplars</td>
<td></td>
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<tr>
<td>9 Sections and Services of a Forensic Laboratory</td>
<td></td>
</tr>
<tr>
<td>10 Introduction to Latent Prints and Crime Scenes</td>
<td></td>
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<tr>
<td>11 Analysis, Comparison, Evaluation, and Verification (ACE-V)</td>
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<tr>
<td>12 Latent Print Processing</td>
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<tr>
<td>13 Other scientific personal identification methods</td>
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<tr>
<td>14 Photography of Latent Prints</td>
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<tr>
<td>15 Digital Imaging</td>
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<tr>
<td>16 Evaluation and Comparison of Friction ridge Impressions</td>
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<td>17 Latent Print Section Case Management and Reporting</td>
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<td>18 Court Procedures, Related Laws, Expert Testimony, applicable Criminal and Civil Procedures</td>
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</table>
## Appendix A  Recommended Reading for Latent Examiners

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of Forensic Identification</td>
<td>by The International Association for Identification</td>
</tr>
<tr>
<td>Advances in Fingerprint Technology 2nd Edition</td>
<td>by Henry C. Lee &amp; R. E. Gaensslen</td>
</tr>
<tr>
<td>Quantitative - Qualitative Friction Ridge Analysis, An Introduction to Basic and Advanced Ridgeology</td>
<td>by David Ashbaugh</td>
</tr>
<tr>
<td>Fingerprint Techniques</td>
<td>by Andre A. Moenssens</td>
</tr>
<tr>
<td>Fingerprint, Palms and Soles</td>
<td>by Harold Cummins and Charles Midlo</td>
</tr>
<tr>
<td>Fingerprint Techniques and Other ridge skin impressions</td>
<td>By Christophe Champod et. Al</td>
</tr>
<tr>
<td>Criminalistics, An Introduction to Forensic Science 9th edition</td>
<td>by Richard Saferstein</td>
</tr>
<tr>
<td>Techniques of Crime Scene Investigation 5th edition</td>
<td>by Berry A. J. Fisher</td>
</tr>
<tr>
<td>Criminal Investigation Basic Perspectives</td>
<td>by Paul B. Weston &amp; Kenneth M. Wells</td>
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<td>Effective Expert Witnessing</td>
<td>by Jack V. Matson</td>
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<td>Law for the Expert Witness</td>
<td>by Daniel A. Bronstein</td>
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<tr>
<td>Manual of Fingerprint Development Techniques</td>
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<tr>
<td>Police Science Development Branch Home Office, UK</td>
<td></td>
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<tr>
<td>Safety Guidelines</td>
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<tr>
<td>International Association for Identification</td>
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<tr>
<td>The Science of Fingerprints</td>
<td>by the FBI</td>
</tr>
<tr>
<td>Safety For the Forensic Identification Specialist 2nd Edition</td>
<td>by Nancy E. Masters</td>
</tr>
</tbody>
</table>
Appendix B  Additional Recommended Training Courses for Latent Examiners

1. Fingerprint Classification  
   40 hrs.

2. Homicide Investigation Techniques Course  
   40 hrs.

2. Clan-Lab Certification Course  
   40 hrs.

3. P.O.S.T. Instructor Development Course  
   32 hrs.

5. International Association for Identification Annual Education Conferences  
   40 hrs.

7. Pacific Northwest Division of IAI meetings and training conferences  
   24 hrs.

All class hours are approximated.

Appendix C  Professional Associations and Certifications

Recommended professional association  
International Association for Identification  
Pacific Northwest Division International Association for Identification

Professional Certification is required after completion of the ISP FS Latent Section training program and two years of work experience.  
International Association for Identification Latent Print Certification (CLPE).

Recommend Optional Certifications  
a. Certified Crime Scene Investigator, (CCSI) Level I  
b. Certified Crime Scene Analyst, (CCSA) Level II  
c. Certified Senior Crime Scene Analyst (CSCSA) Level III  
d. American Board of Criminalistics (Diplomate and/or Fellow)