



OKLAHOMA STATE BUREAU OF INVESTIGATION

LATENT EVIDENCE UNIT

FRiction RIDGE EXAMINATION

TRAINING MANUAL

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I. SCOPE

Each person employed by the OSBI Criminalistics Services Division will complete a documented training program. Each training program must emphasize and teach the skills and knowledge required to achieve the minimum standards of competence and good laboratory practice for each specific area. The objective of a training and development program is to provide highly qualified individuals to serve the Criminal Justice System.

The progress of the trainee will be documented in each section of this training manual and in the form of a monthly training memo stating the training completed during the previous month. The person assigned to the training function will provide the monthly memo. The trainee will be required to meet certain academic and performance standards in order to complete the training program. The trainee will be required to score a minimum of 90% on all academic assignments. If the minimum score is not achieved, re-training will occur per QP19.

II. NEW EMPLOYEE GENERAL TRAINING MANUAL (NETM)

A. If applicable, the trainee will complete the OSBI CSD New Employee General Training Manual. This manual covers the following sections of training:

- 1.0 Introduction
- 2.0 Orientation
- 3.0 Laboratory Safety, Security, and Administrative Procedures
- 4.0 Overview of Forensic Science
- 5.0 Quality Assurance
- 6.0 Ethics in Forensic Science
- 7.0 Forensics in the Courtroom

B. In addition to Section 6.0, the trainee will review the SWGFAST document Model Policy for Friction Ridge Examiner Professional Conduct. [Microsoft Word - Model Policy Professional Conduct-2.docx \(nist.gov\)](https://nist.gov/itl/csd/forensics/forensic-science/forensic-science-training/forensic-science-training-manuals)

III. ADMINISTRATIVE TRAINING

A. Morgue Request Orientation: On occasion the examiners of the LEU will be requested to collect post-mortem impressions at the Office of the Chief Medical Examiner.

1. Explanation of Requests:
 - a. The trainee will be notified of requests by their supervisor, trainer, NCIC, or the responding examiner.
2. Trainee Expectations:

- a. The LEU does not have a call rotation and the trainee will not be expected to be on call during the training period.
- b. In order for the trainee to receive the maximum amount of practical training in post-mortem impression collection, the trainee will be expected to attend all requests when on duty. The trainee will not be expected to attend when scheduled time off has been approved by the Supervisor.
- c. The trainee will be expected to respond, on average, within 30 minutes of receiving notification of a morgue request, unless other arrangements have been made.
- d. The responding examiner will instruct the trainee of their responsibilities at the morgue request.

Date _____ Trainee's Initials _____ Trainer's Initials_____

IV. INTRODUCTION TO FINGERPRINTS

- A. Introduction to Fingerprints: The trainee will gain knowledge on the use of fingerprints for identification.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 1 | | |

- B. History of Fingerprints: The trainee will gain knowledge of the History of Fingerprints, including how fingerprints became used for identification and the major contributors to the science of fingerprints.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Quantitative/Qualitative Friction Ridge Analysis by David Ashbaugh, Chapter 2 | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 1 | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 2 | | |

- C. Classification of Fingerprints

1. Pattern Recognition: The trainee will gain knowledge of the different fingerprint patterns located on the distal phalange of the finger. The definitions and their frequency of distribution in the population will be discussed.
2. Classification Systems: Classification is assigning an identifier to a set of fingerprints, from one individual, based upon the pattern definitions and fingerprint rules. The

trainee will gain knowledge of the different fingerprint classification systems utilized in the past.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| FBI Fingerprint Pattern Recognition booklet. | | |
| The Science of Fingerprints by the US Department of Justice (DOJ)/Federal Bureau of Investigation (FBI), Chapters 2-4 | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 5 | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 4 | | |

D. The trainee will complete a written exam over the history and classification of fingerprints. A minimum score of 90% is required for successful completion.

Date _____ Score _____ Trainer's Initials _____

V. EXAMINATION

A. Scientific Basis for Fingerprint Identification:

1. Persistence: Friction ridge skin forms during fetal development and remains persistent, with the exceptions of increase in size due to normal growth, permanent scarring or amputation, until decomposition sets in after death.
2. Uniqueness/Discriminability: Friction ridge skin is highly discriminating between individuals and can be reliably utilized to differentiate individuals, even identical twins.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| Quantitative/Qualitative Friction Ridge Analysis by David Ashbaugh, pages 87-92 | | |

B. Biology of Friction Ridge Skin: The trainee will gain knowledge of the biological formation of friction ridge skin.

1. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Quantitative/Qualitative Friction Ridge Analysis by David Ashbaugh, Chapter 3 | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapters 2-3 | | |
| Fingerprints and Other Ridge Skin Impressions by Christophe Champod (2 nd Edition), Chapter 1 | | |
| Embryologic Development of Epidermal Ridges and their Configurations by William Babler | | |

| | | |
|---|--|--|
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 3 | | |
|---|--|--|

2. The trainee will complete the following coursework. The coursework can be taught externally or internally by the trainer.

| Required Coursework | Date | Trainee Initials | Trainer Initials/Certificate |
|--|------|------------------|------------------------------|
| Discriminating Power of Friction Ridge Arrangements, Alice White | | | |
| Limits of Uniqueness in Friction Ridge Impressions, Alice White | | | |
| Limits of Persistency in Friction Ridge Skin, Alice White | | | |

C. Recording Known Fingerprints: The trainee will gain knowledge on the different ways to record known exemplars of friction ridge skin.

1. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 4 | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 5 and 7 | | |
| OSBI LEU LP-23: Collection of Postmortem Impressions | | |

D. Friction Ridge Examination: Analysis, Comparison, Evaluation, and Verification (ACE-V) is the methodology by which fingerprint examination is performed.

1. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Quantitative/Qualitative Friction Ridge Analysis by David Ashbaugh, Chapter 4 | | |
| Fingerprints and Other Ridge Skin Impressions by Christophe Champod (2 nd Edition), Chapter 2 | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 9 | | |
| Friction Ridge Skin, by James Cowger, Chapters 6-8 | | |
| Finger Prints, Palms and Soles: An Introduction to Dermatoglyphics, by Harold Cummins and Charles Midlo, Chapter 6 | | |
| Friction Ridge Examination (Fingerprints): Evaluating the Extent and Scope of “Verification” in Analysis Comparison Evaluation and Verification (ACE-V), by John Black | | |
| Detection of Forged and Fabricated Latent Prints, by Pat Wertheim | | |

| | | |
|---|--|--|
| Qualitative Assessment of Skin Deformation: A Pilot Study, by Alice Maceo | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapters 16 and 17 | | |
| OSBI LEU Quality Manual and Procedures | | |

2. The trainee will complete the following coursework. The coursework can be taught externally or internally by the trainer.

| Required Coursework | Date | Trainee Initials | Trainer Initials/Certificate |
|--|------|------------------|------------------------------|
| Examination of Friction Ridge Impressions, Alice White | | | |

E. Known to Known Fingerprint Comparison Exercises

1. The trainee will complete a minimum of 35 ink to ink fingerprint comparison exercises.
2. Additional comparison exercises may be required at the discretion of the trainer and technical manager.
3. Documentation of the completion of each exercise will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server.

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Completion Date for section E. _____ Trainer's Initials_____

F. Introduction to Palm Prints: In the course of working cases, a latent print examiner will have to orient and compare partial palm prints. This can be a difficult task when the partial palm prints are small or lack clarity. The trainee will gain knowledge regarding the flow and creases of palm prints in order to recognize certain clues within the latent palm print and associate them with the correct areas of the palm.

1. The trainee will complete the following reading and conduct the orientation and comparison exercises included in Demystifying Palm Prints.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 18 | | |
| Demystifying Palm Prints, by Ron Smith | | |

G. Known to Known Palm Print Comparison Exercises

1. The trainee will complete a minimum of 20 ink to ink palm print comparison exercises.
2. Additional comparison exercises may be required at the discretion of the trainer and technical manager.
3. Documentation of the completion of each exercise will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server.

Completion Date for section G. _____ Trainer's Initials_____

H. Latent Print Analysis: The trainee will gain knowledge in the analysis of latent prints and apply that knowledge to the comparison of latent prints to known prints.

1. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 6 | | |

2. The trainee will complete the following coursework. The coursework can be taught externally or internally by the trainer.

| Required Coursework | Date | Trainee Initials | Trainer Initials/Certificate |
|--|------|------------------|------------------------------|
| Comparative Dermatoglyphics: Fingers, Palms, and Feet by Alice White | | | |
| Basic Fingerprint Distortion, Alice White | | | |
| Advanced Fingerprint Distortion, Alice White | | | |
| Tonal Transitions: Causes and Visual Effects, Alice White | | | |
| Beyond Discriminating Power of Friction Ridge Arrangements-Applying What You Learned, Glenn Langenburg | | | |
| The Trouble with Exclusions, Alice White | | | |

I. Documentation and Enhancement: The trainee will be taught how to enhance and document the analysis and comparison of digital images of latent prints utilizing Adobe Photoshop and DC55 Fingerprint Enhancement Software.

1. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| LP-18: Digital Enhancement and Documentation | | |
| Photoshop CS3 for Forensics Professionals by George Reis, Chapters 1, 3-7, and 15-22 | | |
| DC55 User Manual | | |

J. Latent Print to Known Print Comparison Exercises

1. The trainee will be instructed on how to document their Analysis, Comparison, and Evaluation on the worksheet utilized in casework.

2. The trainee will complete a minimum of 40 latent print comparison exercises consisting of both fingerprints and palm prints.
3. Additional comparison exercises may be required at the discretion of the trainer and technical manager.
4. Documentation of the completion of each exercise will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server.

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Completion Date for section J. _____ Trainer's Initials _____

VI. DEVELOPMENT

- A. The trainee will gain knowledge of the approved latent print processing techniques utilized by the OSBI LEU to develop latent prints. The trainee will learn what processing techniques to utilize on evidence based on the substrate of the item and the matrix of the latent print. The trainee will also learn the sequential order of processing techniques.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| OSBI LEU Quality Manual and Procedures | | |
| OSBI LEU QPA1 – Sequential Processing Flowchart | | |

B. Practical Exercises

1. The trainee will complete latent print processing exercises. The forms used to document each exercise are located in QMS and \\pm-fsc16482s\QA\Lab-System_Records\Management_System_Docs\LEU\LEU Friction Ridge Examination Training Manual
2. The exercises will include all latent print processing techniques and latent print preservation techniques approved in the OSBI LEU Quality Manual and Procedures.

| Processing Technique | Date | Trainee Initials | Trainer Initials |
|--|------|------------------|------------------|
| Cyanoacrylate | | | |
| Powders: Black, Magnetic, Bi-Chromatic | | | |
| <i>fp</i> Natural 1 Powder | | | |
| <i>fp</i> Natural 2 Powder | | | |
| Ardrox | | | |
| Rhodamine 6G | | | |
| 1,2-Indanedione | | | |
| Ninhydrin | | | |
| Sticky Side Powder | | | |
| Wetwop | | | |
| Gentian Crystal Violet (GCV) | | | |
| Leuco Crystal Violet (LCV) | | | |
| Amido Black | | | |

| | | | |
|-------------------------------|--|--|--|
| Acid Yellow 7 | | | |
| Sudan Black | | | |
| Small Particle Reagent (SPR) | | | |
| Vacuum Metal Deposition (VMD) | | | |

| Preservation Method | Date | Trainee Initials | Trainer Initials |
|---|------|------------------|------------------|
| Lifting Tape: Lifting Tape, Polyethylene Tape, DIFF-Lift Tape, Gel Lift | | | |
| Silicone Lift: Mikrosil, AccuTrans | | | |
| Photography: DSLR Camera | | | |
| Photography: DCS5 Camera | | | |
| Photography: CSU & PLT | | | |

C. Reagent Preparation

1. As a part of their practical exercises, the trainee will gain knowledge on the preparation, documentation and quality control of reagents used for evidence processing.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| OSBI LEU Latent Print Processing Standard Operating Procedures, Section IV. Reagent Preparation | | |
| OSBI CSD Quality Manual, QP8.1 – Ordering, Receiving, and Verifying Reagents and Supplies | | |
| OSBI CSD Quality Manual, QP8.2 – Chemical Inventory – General Use | | |
| OSBI LEU Chem Inventory Instructions | | |

2. Under the supervision of the trainer, the trainee will conduct reagent preparation as reagents are needed. The trainee will conduct the quality control procedures and log the reagent in Chemical Inventory.
3. The trainee will demonstrate their knowledge and skills by conducting an observation-based competency exam. The competency exam will be documented on the OSBI LEU Observation Based Competency for Reagent Preparation located in QMS and \\pm-fsc16482s\QA\Lab-System_Records\Management_System_Docs\LEU\LEU Friction Ridge Examination Training Manual
4. Successful completion of the competency exam is achieved by performing the task following all OSBI CSD and LEU procedures with no technical issues noted.
5. Once competency is achieved, the Technical Manager will authorize the trainee to conduct reagent preparation.

Completion Date for section C. _____ Trainer's Initials _____

VII. INDIVIDUAL CHARACTERISTIC DATABASE (ICD)

A. MorphoBis

The trainee will be instructed in the proper uses of the OSBI Automated Fingerprint Identification System (AFIS). The trainee will complete twenty-two practical exercises, which will be assigned and monitored at the discretion of the trainer and technical manager.

1. Latent Entry and Search:

This is the function of the AFIS system that allows an unknown print to be entered into the system and searched against the State Fingerprint Repository.

2. Latent Verification:

This is the function of the AFIS system that allows a latent print examiner to compare the results of the search with the unknown print to check for possible identifications.

- a. Identification Procedures:** If an identification is made using AFIS, the trainee will need to do the following:
 - 1) Obtain the known impressions and perform a manual comparison.
 - 2) Seek verification if needed.
 - 3) Select identification in the AFIS system and save the results.
 - 4) Record the identification made on the practical exercise sheet.

3. Reverse Searches:

If a latent print is of sufficient quality, it may be retained in the AFIS system to be searched against all new finger/palm print records after the time of the initial latent search. The trainee will be shown how to check reverse searches, for possible identifications, in the same manner as latent verifications.

4. Refer to the MBIS5 Latent Expert User Guide, the MBIS5 Reviewer User Guide, and the MBIS5 Training Guide located in QMS for further instruction.

B. Oklahoma City Police Department Fingerprint/Palm Print Database

The Oklahoma City Police Department (OCPD) database contains some known records that are not contained in the OSBI or FBI databases. This system may be used for any crime, but should routinely be used for all violent crimes or cases of unidentified persons. The trainee will complete fourteen practical exercises, which will be assigned and monitored at the discretion of the trainer and technical manager.

- 1. Latent Entry and Search:** Utilize MBIS5 to search a latent print that was previously searched through the OSBI database.
- 2. Latent Verification:** Conduct latent verification the same as the OSBI database searches.

- a. Identification Procedures: If an identification is made through the OCPD database, the trainee will need to do the following:
 - 1) Obtain the known impressions by performing an OCPD IRQ.
 - 2) Perform a manual comparison to the known impressions.
 - 3) Seek verification if needed.
 - 4) Select identification in the AFIS system and save the results.
 - 5) Record the identification made on the practical exercise sheet.
3. Reverse Searches: OCPD database reverse searches are reviewed in the same manner as OSBI reverse searches.

C. FBI Fingerprint/Palm Print Database

The FBI Fingerprint/Palm Print Database which is referred to as Next Generation Identification (NGI), allows remote latent searching of the FBI's fingerprint/palm print database. This system may be used for any crime, but should routinely be used for all violent crimes or cases of unidentified persons. The trainee will complete fourteen practical exercises, which will be assigned and monitored at the discretion of the trainer and technical manager.

1. Latent Entry and Search:

Searches through NGI may be conducted utilizing the OSBI AFIS system or by utilizing the FBI's software called Universal Latent Workstation (ULW). Please refer to the "Entry Guidelines" included as part of the ULW software.

2. Latent Verification:

After searching a print through the FBI's files, a candidate list with a corresponding image will return from the FBI's system.

- a. Identification Procedures: If an identification is made searching NGI, the trainee will need to do the following:
 - 1) Obtain the known impressions and perform a manual comparison.
 - 2) Seek verification if needed.
 - 3) Select identification in the AFIS system or ULW, and save the results.
 - 4) Record the identification made on the practical exercise sheet.

VIII. RECORDING LIVING AND POST-MORTEM FRICTION RIDGE SKIN

Occasionally, the examiners of the LEU will be requested to record known impressions from living individuals or respond to the Office of the Chief Medical Examiner (OCME) to collect post-mortem impressions from decedents for identification and/or elimination purposes. Under special circumstances, the examiner may also have to have fingers/hand removed, and/or transport evidence for submittal to the appropriate laboratory units.

A. Documentation

The trainee will be instructed in the proper procedure for filling out common forms relevant to the collection of known impressions outside of the laboratory. Some examples of these forms include the Crime Scene Memo and RFLE.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| OSBI LEU Crime Scene and Morgue Request Standard Operating Procedures | | |
| OSBI CSD Quality Manual, QP27 – Crime Scene Response | | |

B. Known Print Collection:

1. The trainee will be instructed on the collection of major case impressions. Major case impressions include the tips and sides of the fingers, the joints of the fingers, and the palm of the hand. In special circumstances, the inked impressions of the friction ridge skin of the feet may also be collected. On occasion, only fingerprints for identification purposes are needed.

| Required Reading | Date | Trainee Initials |
|---|------|------------------|
| OSBI LEU LP-23: Collection of Postmortem Impressions | | |
| The Science of Fingerprints by the US Department of Justice (DOJ)/Federal Bureau of Investigation (FBI), Chapters 11 & 19 | | |
| Scott's Fingerprint Mechanics, by Robert Olsen Sr., pages 84-89 | | |
| Friction Ridge Skin, by James Cowger, Chapter 2 | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 4 | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 5 | | |

| Required Videos: Postmortem Printing Series — BioSpecs (fbi.gov) | Date | Trainee Initials |
|--|------|------------------|
| Postmortem Printing Trailer | | |
| Recording Techniques and Biology of Skin | | |
| Quick Reconditioning and Digital Scanning | | |
| Tissue Builder Technique | | |
| Photography of Friction Ridge Skin | | |
| Postmortem Palm Printing | | |
| Degloving Method | | |
| Boiling Rehydration Method | | |
| Casting Techniques | | |
| Hydroxide Rehydration Techniques | | |
| Burned Remains | | |

2. The trainee will conduct practical exercises in the laboratory by collecting major case impressions from living individuals.

3. The trainer (or designee) will evaluate the major case impressions to ensure the recordings are clear and complete.
4. The trainee will conduct as many practical exercises as is necessary for the trainee to show competency in the task. Successful competency is achieved when the trainee can record clear and complete major case impressions from living individuals.
5. Documentation of the practical exercises completed and the evaluation by the trainer (or designee) will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server. \\pm-fsc16482s\QA\Individual_Records\Latents
6. The trainee will respond to morgue requests with an authorized examiner and will be taught how to collect major case impressions from decedents. The trainee will collect major case impressions from decedents under the supervision of the authorized examiner.
7. The authorized examiner will evaluate the major case impressions to ensure the recordings are clear and complete. The authorized examiner will collect additional recordings of the decedent if necessary.
8. The trainee will respond to as many morgue requests as is necessary for the trainee to show competency in the task. Successful competency is achieved when the trainee can record clear and complete major case impressions from decedents.
9. Documentation of morgue requests attended and the evaluation by the authorized examiner will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server. \\pm-fsc16482s\QA\Individual_Records\Latents

C. Evidence Submittal:

The trainee will be instructed on the transport and submittal of evidence collected outside of the laboratory.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| OSBI CSD Quality Manual, QP4 – Review of Request, Tenders, and Contracts | | |
| OSBIEP QP 1– Evidence Intake | | |
| OSBI LEU BEAST Case Creation Instructions for Morgue and Crime Scenes | | |

D. Crime Scene Narrative:

The trainee will be instructed how to report activities conducted outside of the laboratory.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| OSBI CSD Quality Manual, QP27 – Crime Scene Response | | |
| OSBI CSD Quality Manual, QP28 – Report Writing | | |

| | | |
|---|--|--|
| OSBI LEU Crime Scene and Morgue Request Standard Operating Procedures | | |
|---|--|--|

- E. The trainee will demonstrate their knowledge and skills by conducting an observation-based competency exam. The competency exam will be documented on the OSBI LEU Observation Based Competency for Post-Mortem Impression Collection located in QMS and \\pm-fsc16482s\QA\Lab-System_Records\Management_System_Docs\LEU\LEU Friction Ridge Examination Training Manual
- F. Once competency is achieved, the Technical Manager will authorize the trainee to collect living and post-mortem impressions.

Completion Date for section VIII. _____ Trainer's Initials _____

IX. CASE MANAGEMENT

- A. Review OSBI CSD Quality System

Certain policies within the OSBI CSD Quality Manual apply directly to casework. The trainee and trainer will review the appropriate policies that govern certain aspects of casework.
- B. Overview of Case Workflow

The trainer will explain the step-by-step process of being assigned a case to reporting the results. Different types of cases and different request (processing vs analysis) will require different steps. The trainee will be familiarized with the different types of cases he/she may encounter and the workflow for each type of case.
- C. Evidence Handling

The trainer will explain evidence handling procedures for latent print examination. The trainee should be familiar with the OSBI Safety Policy regarding PPE. The trainee will be instructed on how to prepare an inventory of items. The trainee will be instructed on evidence storage procedures. The trainee will be instructed on creating derivative evidence. The trainee will be instructed on the proper routing of forensic testing for evidence that may be analyzed by another lab section.
- D. Evidence Tracking System

This is the system by which the OSBI tracks the chain of custody of evidence while it is in the possession of the OSBI. The trainee will be instructed in the proper procedure for receipt of evidence, transfer of evidence, and release of evidence.
- E. Computerized Criminal History (CCH) and Interstate Identification Index (III)

These systems contain criminal history information, applicant information, and driver's license records. These systems may be used to locate known prints, from the OSBI and FBI files, for comparison purposes. The trainee will be instructed in the proper use of the CCH and III system.

The trainee will refer to the OSBI LEU CCH Instructions and OSBI LEU III instructions located in QMS and \\pm-fsc16482s\QA\Lab-System_Records\Management_System_Docs\LEU\LEU_Friction_Ridge_Examination_Training_Manual

F. Documentation of Results

1. Case Notes: An examiner's case notes are a record of what evidence was analyzed, any developmental processes used on that evidence, and results of any analysis.
 - a. Case notes should be written in such a way that another examiner could read these notes and determine each examination activity conducted, the sequence of those activities, and the results of the activities.
 - b. The trainee will be instructed in the proper method for completing a case note form.

G. Examination Report: The examination report is the document containing the results of testing performed that is sent to the requesting agency, district attorney, and/or any other agency or person approved by OSBI policy.

- a. The trainee will refer to Policies QP28 and QP33 of the OSBI CSD Quality Manual for further instruction in the format, content, style, and distribution of examination reports.

H. Other Case File Forms

1. Depending on the type of case, additional case file forms may be required. Some examples of these forms are: Photo-Log, Crime Scene Memo, Crime Scene Checklist, etc.

I. Administrative and Technical Review

1. The administrative and technical review process assists to ensure the quality of work.
2. The trainee will be instructed on the process of reviewing casework.
3. For further instruction, the trainee will refer to Policy QP31 of the OSBI CSD Quality Manual and the LEU Quality Manual and Procedures.
4. The trainer will discuss non-conforming work (NCW) with the trainee and will refer to Section XIV-Non-Conforming Work of the LEU Quality Manual.

J. Mock Cases

1. The trainee will complete a minimum of ten mock cases. More may be assigned at the discretion of the trainer and technical manager.
2. Documentation of mock cases completed will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server. \\pm-fsc16482s\QA\Individual_Records\Latents

X. APPLICABLE CRIMINAL AND CIVIL LAW AND PROCEDURES

A. The trainee will complete the following reading.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| Oklahoma State Statute §74-150.37, "Forensic Laboratory Accreditation Act" | | |
| The Fingerprint Sourcebook by the National Institute of Justice (NIJ), Chapter 13 | | |
| Forensic Evidence: Science and the Criminal Law, by Terrence Kiely, Chapters 1-2 & 8 | | |
| Fundamentals of Fingerprint Analysis by Hillary Moses Daluz, Chapter 19 | | |
| Courtroom Testimony for Fingerprint Examiners by Hillary Moses Daluz | | |
| Courtroom Testimony Techniques, "Success Instead of Survival" by Ron Smith | | |

B. The trainee will complete the following coursework. The coursework can be taught externally or internally by the trainer.

| Required Coursework | Date | Trainee Initials | Trainer Initials/Certificate |
|---|------|------------------|------------------------------|
| Modeling Fingerprint Minutiae, Alice White | | | |
| How to Prepare for a Daubert Hearing, Glenn Langenburg | | | |
| Error Rates, Human Factors, & Quality Management Systems, Alice White | | | |
| Importance of Expertise in Friction Ridge Examinations, Alice White | | | |

C. Testimony Observation

1. If possible, the trainee will attend court and observe cases where latent print testimony will be given by an authorized examiner.
2. Documentation of testimony observed will be maintained in a Training Spreadsheet located in the trainee's Individual folder on the QA server.

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D. Formal Testimony Training

1. If possible, the trainee will attend educational courses dealing with the topic of Expert Witness Testimony.

E. Court Exhibit Preparation

1. The trainee will be instructed in the proper method for creating a charted enlargement and presenting it to a judge and jury.

| Required Reading | Date | Trainee Initials |
|------------------|------|------------------|
|------------------|------|------------------|

XI. FINAL EVALUATION

All personnel shall successfully complete a competency test prior to performing activities or testing which influence the results of the testing activities. If the trainee's performance in the competency test is unsatisfactory, re-training will occur in the areas deemed unsatisfactory. Refer to Policy QP19 of the OSBI CSD Quality Manual for information regarding re-training.

A. Competency Test

1. The trainee will complete an oral and/or written competency test to evaluate the trainee's knowledge of the technical aspects of latent print examination. The oral and/or written competency test will be administered by the trainee's supervisor, technical manager, and/or other designees. A score of 90% is required to pass this portion of the competency test. If the trainee does not score a minimum of 90% then re-training will occur per QP19.
2. The trainee will complete a practical competency test in the form of a mock case assigned in the BEAST consisting of a range of evidence items. The trainee will select and perform the proper development and preservation method(s) on the evidence items in accordance with LEU procedures. The trainee will analyze all developed latent prints and conduct the appropriate comparisons/automated searches according to the LEU Quality Manual and Procedures. The trainee will document their analysis in a case note form and document their results in a report. The trainer and/or technical manager will review the case to confirm that the expected results were achieved. The trainer and/or technical manager will review the report to evaluate the trainee's ability to accurately and clearly convey testing results and the significance of the results. Successful completion of the practical competency test requires obtaining the expected results with no technical errors. If the trainee does not obtain the expected results or has a technical error, then re-training will occur per QP19.
3. Upon successful completion of the mock case, the trainee will prepare for, and undergo a mock trial. The trainee will be evaluated on appearance, demeanor, poise, correlation of response with case and report information, and the ability to communicate information in a way a jury could understand. Reviewers of the mock trial will complete the Friction Ridge Mock Trial Evaluation Form (OSBI LEU FR TMA 1). A cumulative average score of Satisfactory (3) or above is required for successful completion.

For further information about competency tests, the trainee will refer to Policy QP19 of the OSBI CSD Quality Manual.

XII. TECHNICAL/ADMINISTRATIVE REVIEWS AND VERIFICATIONS

A. After the completion of 1-year of full-time casework, if the examiner has had no quality concerns rising to a Class III/IV nonconforming work, the examiner will begin training to conduct verifications and technical/administrative reviews. The time frame of 1-year of full-time casework may be adjusted as necessary by the Technical Manager.

| Required Reading | Date | Trainee Initials |
|--|------|------------------|
| OSBI CSD Quality Manual, QP31 - Reviews | | |
| OSBI LEU Quality Manual, Section XIII – Administrative and Technical Review Procedures | | |
| OSBI LEU Quality Manual, Section XIV – Nonconforming Work (NCW) | | |

B. The examiner will shadow a senior examiner while they are conducting verifications and technical/administrative reviews.

Completion Date for section B. _____ Trainer's Initials _____

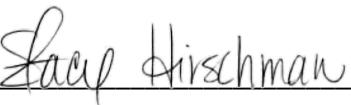
C. The Technical Manager will authorize the examiner to conduct verifications and technical/administrative reviews in the following stages.

1. Stage 1 (approximately 3 months) - Conduct verifications and technical/administrative reviews on non-violent offense cases. If no significant errors or issues are identified, the examiner will progress to Stage 2.
2. Stage 2 (approximately 3 months) – Conduct verifications and technical/administrative reviews on smaller violent offense cases (determined by the Supervisor). If no significant errors or issues are identified, the examiner will be released to conduct full verifications and technical/administrative reviews.

XIII. MAINTENANCE OF SKILLS AND EXPERTISE

The examiners of the LEU will maintain their skills and expertise by continually utilizing them while conducting casework. This will be tested annually through the completion of a proficiency test. The examiners of the LEU will also participate in continuing education as described in Policy QP19 of the OSBI CSD Quality Manual.

XIV. APPROVAL

OSBI LEU Technical Manager:  12/16/2025

Stacy Hirschman

DATE

OSBI Criminalistics Quality Manager:  12/16/25

Danielle Ross-Carr

DATE

OSBI CSD Director:  12/16/2025

Janice Joslin

DATE

XV. HISTORY

| Rev # | Effective Date | History |
|-------|----------------|--|
| 00 | 12-31-2023 | Reorganized Manual to include only Friction Ridge Examinations Training. Footwear Examinations Training and Crime Scene Training were moved to separate training documents. Updated the required reading material. Reformatted to match formatting of LEU Quality Manual and Procedures. Created new attachment, FR TMA 1. |
| 01 | 10-30-2024 | See Tracked Changes document in QMS for changes made. |
| 02 | 12-31-2025 | Incorporated suggestions [See Track Changes document]. |

XVI. Attachments

OSBI LEU BEAST Case Creation Instructions for Morgue and Crime Scenes
OSBI LEU CCH Instructions
OSBI LEU Chem Inventory Instructions
OSBI LEU FR TMA 1 - Friction Ridge Mock Trial Evaluation Form

OSBI LEU III Instructions

OSBI LEU Observation Based Competency for Post-Mortem Impression Collection

OSBI LEU Observation Based Competency for Reagent Preparation

OSBI LEU Processing Practical Exercise Forms