

AUSTIN POLICE DEPARTMENT
FORENSIC SCIENCE DIVISION
LATENT PRINT SECTION
TRAINING MANUEL

TABLE OF CONTENTS

Forward

Preface

Overview of Training Program

Chapter 1: Introduction to the Latent Print Section

Chapter 2: Ethics and Professionalism

Chapter 3: Introduction to the Science of Fingerprints

Chapter 4: Pattern Interpretation and Classification Systems

Chapter 5: Basic Friction Ridge Comparison

Chapter 6: AFIS Operations/Procedures

Chapter 7: Court Testimony

Final: Moot Court and Examination

Appendix A: Code of Ethics

Appendix B: Student Progress Records

Appendix C: Article List for LPE Training Program

Appendix D: Check Off List

Foreword

During the last quarter of a century, the documented training of latent print examiners although important has received more emphasis because of the IAI's Latent Print Certification Program, the ASCLD-LAB Certification Program, and the recent court decisions of Daubert, and Kelly/Fry.

This training program was designed for new Latent Print Examiners in the Forensic Science Division of the Austin Police Department as a means and a guide to provide the Latent Print Examiner Trainee with the necessary skills, and education to meet the current and future challenges in the science of fingerprints.

This training program was designed to instruct the trainee with no background or training in fingerprints. Although some knowledge of fingerprints prior to starting this training program

would certainly be beneficial it is not the most critical skill necessary to become a proficient latent print examiner. Those trainees who start this program with some prior training in fingerprints may be able to complete the program in less time than is provided. Although written to be as comprehensive as possible, this training program is only the beginning of the knowledge that is offered to the trainee. It is necessary and recognized that only by attending continuing education classes, seminars, and discussion with other trained and experienced examiners can the trainee reach a level of ability and high standards that are an important part of the Science of Fingerprints.

Preface

Purpose

To define minimum topics and critical tasks for AFIS T training. This program is designed to train AFIS Technicians assigned to support the discipline of latent print examinations with the Austin Police Department Forensic Science Division. Trainee's will learn all aspects of the science of fingerprints dealing with Interpretation, Classification, Local AFIS, and Testimony by learning the application of proper techniques and procedures. Other areas of instruction would include those topics that would assist the AFIS Technician in the performance of their duties with the Austin Police Department. Successful completion of this training program results in a AFIS Technician who is technically proficient in searching and screening of latent and presentation of their findings as an expert witness.

Responsibility

The Latent Print Section Supervisor will supervise the maintenance of this training document. Revisions to this document are subject to the approval of Management.

Hours

Although written to encompass 220 hours of training time, the total hours may be more or less than written and is dependent on the ability, skills, incentive of the trainee, and those situations which cannot be controlled, such as leave, sickness, or work load.

Overview of Training Program

This training program consists of six months introduction to the science of fingerprints and Local AFIS duties.

Chapters	Course of Instruction	Approximate Hours Required
1	Introduction to the Latent Print Section	40
2	Ethics and Professionalism	20
3	Introduction to the Science of Fingerprints	20
4	Classification Systems	20
5	Basic Friction Ridge Comparisons	20
6	AFIS Operations / Procedures	40
7	Court Testimony	20
Final	Examination and Moot Court	20

This course listing does not preclude the instructor from adding other pertinent topics as may be applicable and/or related to the science of fingerprints, forensic science and the criminal justice system. The LPS supervisor prior to instruction or incorporation within the program must approve additional course or topics.

Blocks of instruction may be segmented as may be necessary for optimal understanding of the subjects and concepts presented. Field trips are authorized to enhance courses under current study. All courses will be supplemented by required readings, group discussion, independent and direct study, practical exercises, or research (or any combination thereof).

Although the student's primary interaction will be with the assigned instructor and sections can be taught by other examiners, this *Course of Study* promotes and encourages discussion with other experienced examiners.

Chapter 1: Introduction to the Latent Print Section

1. TRAINING HOURS: Forty (40)
2. GENERAL TRAINING OBJECTIVES: The trainee will attain:
 - A. An understanding of the mission and operation in effect for the City of Austin and the Austin Police Department.
 - B. An understanding of the mission and standard operating procedures in effect for the Forensic Science Division and specifically the Latent Print Section.
 - C. An introduction to the training program for an AFIS Technician.
 - D. An introduction to the records and forms as used by the Latent Print Section.
 - E. An introduction to the library and available reference material.
 - F. An understanding of the existence of federal, state, local criminal and civil fingerprint and footprint files.
3. GENERAL TRAINING OUTLINE:
 - A. City of Austin Procedures and Forms
 - B. Austin Police Department Procedures and Forms
 - C. Forensic Science Division Procedures and Forms
 - D. Latent Print Section Procedures and Forms
 - E. Latent Print Examiner Training Program
4. REQUIRED READING:
 - A. City of Austin Personnel Policies, Public Drive
 - B. General Orders Austin Police Department, Public Drive
 - C. Division Operations Manual, Forensic Science Division, LIMS
 - D. SOP, Latent Print Section Austin PD, LIMS
 - E. Handout LPE - #1.1
 - F. Handout LPE - #1.2
 - G. Video – CJIS Overview
5. TRAINING STANDARD:
 - A. The trainee must pass a written test (the only open book test in this program).

Chapter 2: Ethics and Professionalism

1. TRAINING HOURS: Twenty (20)
2. GENERAL TRAINING OBJECTIVES: The trainee will attain:
 - A. An understanding of the role and purpose of ISO, ASCLD and ASCLD/LAB.
 - B. An understanding of professional and professionalism.
 - C. An understanding of morals and ethics in Forensic Science.
 - D. Be aware of the career progression program.
 - E. Be aware of the requirements for latent print certification.
 - F. An understanding of the importance of continuing education and keeping abreast of current issues in the field.
3. GENERAL TRAINING OUTLINE:
 - A. Professional Organizations (i.e. IAI, TDIAI, SWAFS, AAFS)
 1. Participation
 2. Purpose
 - B. Codes of Ethics and Professional Conduct
 1. Forensic Science Division
 2. Latent Print Section
 3. IAI
 4. TDIAI
 5. SWGFAST
 - C. Certification – Practitioner Quality Assurance Standards
 1. IAI Latent Print Certification
 - D. Accreditation – Laboratory Quality Assurance Standards
 1. American Society of Crime Lab Directors (ASCLD)
 2. American Society of Crime Lab Directors / Laboratory Accreditation Board (ASCLD/LAB)
 3. International Organization for Standardization (ISO)
 - E. Professional – Having Skills or Experience to Perform Duties.
 1. Adequately Trained or Experienced to Perform Duties
 2. Fulfills the Minimum Requirements of the Job
 - F. Professionalism – The Quality of the Individual
 1. Does More Than is Required and Enforces Standards
 2. Strives to Improve the Workplace
 3. Encourages Others by Training
 - G. Morals – Individual
 1. Without Morales Ethics is Unattainable
 - H. Ethics – Rules or Standards Governing the Conduct of the Members of a Profession
 1. Abide by the Spirit and Intent of the Law
 2. Do Not Fabricate or Falsify Evidence or Reports
 3. Treat Everyone with Respect
 4. Follow Department Rules and Regulation
 5. Do Not Use Position for Personal Gain

- I. Continuing Education
 - 1. Attending Educational Conferences
 - 2. Attending Classes Offered by Other Agencies (i.e. FBI, DPS)
 - 3. Keeping Abreast of Current Issues and Relevant Court Cases
 - a. Journal of Forensic Science
 - b. Journal for Forensic Identification
 - c. Web Sites (i.e. CLPEX, ONIN)
 - 4. Reading Books and Articles
- J. Career Progression Program
 - 1. Requirements for Promotion to Position of Senior Latent Print Examiner

4. REQUIRED READING:

- A. Ethics and the Practice of Forensic Science, Bowen Chapters 1-3, 5-7
- B. Fingerprint Identification, Leo Chapter 1
- C. Handout LPE - #2.1
- D. Handout LPE - #2.2
- E. Handout LPE - #2.3
- F. Handout LPE - #2.4

5. SUPPLEMENTAL READING

- A. Symposium: Ethical Conflicts in the Forensic Sciences, JFS May 1989 Pgs. 717 – 793
A series of five articles dealing with ethics and testimony

6. TRAINING PRACTICAL:

None

7. TRAINING STANDARD:

None

Chapter 3: Introduction to the Science of Fingerprints

1. TRAINING HOURS: Twenty (20)

2. GENERAL TRAINING OBJECTIVES: The trainee will attain:

- A. An understanding on early methods of personal identification.
- B. An understanding of the formation of friction ridges.
- C. An understanding of the scientific observations leading to modern fingerprint identification.
- D. An understanding of the chronology of fingerprints.
- E. An understanding of the terminology used in the science of fingerprints.
- F. An understanding of the premises of friction ridge detail.

3. GENERAL TRAINING OUTLINE:

- A. Personal Identification Methods and Their Uses
 - 1. Early Non Scientific Methods
 - 2. Scientific Methods Other Than Fingerprints
- B. Formation and Physiology of Friction Ridge Skin
- C. History of the Science of Fingerprints
 - 1. Pre - Christian Era
 - 2. Post - Christian Era
 - 3. 1600 to 1800
 - 4. 1800 to 1900
 - 5. 1900 to Present
- D. Science of Fingerprint Terminology

4. REQUIRED READING:

- A. Q&Q Friction Ridge Analyses, Ashbaugh Chapters 2 & 3
- B. Fingerprint Techniques, Moenssens Chapters 1 & 2
- C. Advances in Fingerprint Technology, Gaensslen, Lee Chapter 1(2nd Edition)
- D. Fingerprint Source Book, NIJ Chapters 1 & 2
- E. Handout LPE - #3.1
- F. Handout LPE - #3.2
- G. Handout LPE - #3.3
- H. Handout LPE - #3.4

5. SUPPLEMENTAL READING:

- A. Fingerprints, Bevan
- B. Identification Wanted, Police History Series

6. DISCUSSION TOPIC:

LP APFIS Training Manual Effective Date: January 1, 2014	Approved by Laboratory Director Printed Copies are not Controlled Page 7 of 15
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A. Reasons for friction ridge skin.

7. TRAINING STANDARD:

A. The trainee must pass a written test.

Chapter 4: Pattern Interpretation and Classification Systems

1. TRAINING HOURS: Twenty (20)

2. GENERAL TRAINING OBJECTIVES: The trainee will attain:

- A. An understanding of the different pattern types.
- B. An understanding of the NCIC Classification System.
- C. Familiarization of palm print and sole print classification systems.
- D. Familiarization with different fingerprint records (civil and criminal).

3. TRAINING OUTLINE:

- A. Pattern Interpretation
 - 1. Arches
 - 2. Loops
 - 3. Whorls
- B. The NCIC Classification System
- C. Other Classification Systems

4. REQUIRED READING:

- A. Friction Ridge Skin, Cowger Chapter 3
- B. Fingerprint Source Book, NIJ Chapter 5
- C. Handout LPE - #5.1

5. ONE ON ONE INSTRUCTION

- A. Fingerprint Training Manual, FBI (Green Book REV. 12-93)
- B. Complete exercises from FBI fingerprint training manual

6. DISCUSSION TOPIC:

A. The differences between classification and identification.

7. TRAINING PRACTICALS:

A. Complete pattern interpretation exercise

8. TRAINING STANDARD:

- A. The trainee must pass a written test.
- B. The trainee must satisfactorily complete all practical exercises.

Chapter 5: Basic Friction Ridge Comparison

1. TRAINING HOURS: Forty (40)
2. GENERAL TRAINING OBJECTIVES: The trainee will attain:
 - A. The basic skills necessary for comparing inked friction ridge detail.
 - B. The use of friction ridge flow and characteristics to determine identity or non-identity.
 - C. The basic concept of friction ridge quality.
 - D. An understanding of natural and unnatural breaks in ridge flow.
 - E. An understanding of what is a valid identification.
 - F. An understanding why a minimum “number” of matching ridge characteristics is not used to effect an identification.
3. TRAINING OUTLINE:
 - A. The Use of Ridge Flow (Patterns)
 - B. Friction Ridge Characteristics
 1. Ending Ridge
 2. Bifurcation
 3. Dot
 - C. Natural Breaks in Friction Ridge Flow
 - D. Sufficiency in Detail to Establish Identity
 - E. Consultation in Difficult Prints
4. REQUIRED READING:
 - A. Scott's Fingerprint Mechanics, Olsen Sr. Chapter 1
 - B. Fingerprint Techniques, Moenssens Pgs. 252-270
 - C. Fingerprint Source Book, NIJ Chapter 9
 - D. Handout LPE - #6.1
 - E. Handout LPE - #6.2
 - F. Handout LPE - #6.3
 - G. Handout LPE - #6.4
 - H. Handout LPE - #6.5
 - I. Handout LPE - #6.6
 - J. Handout LPE - #6.7
 - K. Handout LPE - #6.8
5. ONE ON ONE INSTRUCTION:

A. Section 6: Fingerprint Comparison CD, FBI Scientific Basics

6. DISCUSSION TOPIC:

A. The terms identical and similar may be used interchangeably.

7. TRAINING PRACTICALS:

- A. Ridge Path Exercise #1
- B. Inked to Inked 90 Singles
- C. 1 to 5 Match 85 Sets
- D. 1 to 5 Match 30 Sets
- E. Two Prints (B 1-20)
- F. Full Pattern (B 1-20)
- G. Full Pattern (A 1-40)

8. TRAINING STANDARD:

A. The trainee must satisfactorily complete all practical exercises.

Chapter 6: AFIS Procedures / Operations

1. TRAINING HOURS: Forty (40)
2. GENERAL TRAINING OBJECTIVES: The trainee will attain:
 - A. An understanding of the history of AFIS.
 - B. The operational procedures for local AFIS database.
 - C. An understanding of direct entry latent inquiries.
 - D. The aspects of on screen comparison.
 - E. The operational procedures for hit and non-hits.
 - F. The aspects of the unsolved latent database.
 - G. An understanding of the database maintenance.
 - H. General knowledge of automated classification systems.
 - I. An understanding of other biometric systems.
 - J. Live scan technology and how it differs from other method of recording fingerprints.
3. GENERAL TRAINING OUTLINE:
 - A. The History and Science behind AFIS
 - B. Different Types of Searches Performed
 - C. AFIS Operations (local)
 1. Maintaining Chain of Custody
 2. Determining Suitability
 3. Marking Latent for Entry
 4. Documentation in Appropriate Databases
 5. Latent Print Entry
 - a. Level of Case Determines Priority and Logical Search Progression
 - b. Importing Images From CD Into CAFIS
 6. Latent Print Editing
 7. Setting Search Parameters
 8. Viewing Candidate List
 9. Documentation of Hits
 - D. Database Maintenance
 1. Deleting Latent Prints That Have Been Identified or the Statues Have Expired
 2. When to Register in the Unsolved Latent Database
 - E. Retrieval of Known Standards
 - F. Compatibility Issues
 - G. How Live Scan Works
 - H. Electronic Transmission Standards (NIST)
 - I. Equipment Maintenance and Calibration

4. REQUIRED READING:

- A. AFIS, Komarinski Chapters 1 - 6 & 8
- B. Advances in FP Technology, Lee, Gaensslen Chapter 8 (2nd Edition)
- C. Fingerprint Source Book, NIJ Chapter 6
- D. Handout LPE - #9.1
- E. Handout LPE - #9.2
- F. Handout LPE - #9.3
- G. Handout LPE - #9.4
- H. Handout LPE - #9.5
- I. Handout LPE - #9.6
- J. Video – FBI IAFIS

5. SUPPLEMENTAL READING

- A. AFIS Operations Guide, Cogent (Local) Chapters 1, 2, 12 - 24 Appendixes A - O
- B. LIMS Operations Guide, LIMS

6. DISCUSSION TOPIC

- A. Should every print searched be registered in the ULDB?

7. TRAINING PRACTICALS:

- A. Cogent Proficiency Test

8. TRAINING STANDARD:

- A. The trainee must satisfactorily complete all practical exercises.
- B. The trainee must satisfactorily pass a written test.

Chapter 7 Court Testimony

1. TRAINING HOURS: Twenty (20)
2. GENERAL TRAINING OBJECTIVES: The trainee will attain:
 - A. An introduction to courtroom demeanor.
 - B. An introduction to the American court system; policy and procedure.
 - C. An understanding of significant court cases.
 - D. An understanding of the scientific admissibility of friction ridges.
 - E. An understanding of the legal admissibility of evidence
 - F. An understanding of the basic court terms and definitions.
 - G. An understanding of the professional restrictions regarding answers to questions regarding possible, probable, or likely identifications.
 - H. An understanding of proper case preparation prior to appearance in court.
3. GENERAL TRAINING OUTLINE:
 - A. The Criminal Justice System
 1. Municipal Courts
 2. County Courts
 3. Grand Juries
 4. State District Court
 5. Federal Court
 - B. Notification
 1. Subpoena
 2. By the Witness Office
 - C. Preparation
 1. Personal Appearance
 2. Pre-Trial Conference When Possible
 3. Preparation for Testimony
 - a. CV
 - b. Qualifying Questions
 4. Review the Courtroom
 - D. Custody and Control of Evidence
 - E. Introduction of Evidence
 - F. Courtroom Procedures
 1. Voir Dire (Qualifying the Expert)
 2. Direct Examination (Prosecution)

- 3. Cross Examination (Defense)
- 4. Re-Direct and Re-Cross
- G. General Rules of the Court
 - 1. Taking the Oath
 - 2. Invoking the Rule
 - 3. Objections
 - a. Sustained
 - b. Overruled
 - 4. Referring to Notes
 - 5. Directing Responses
 - 5. Ultimate Issue
 - 6. Being Excused From the Stand
 - 7. Guilt or Innocence Phase
 - 8. Punishment Phase (Pen Packets)
- H. Defense Tactics
- I. Federal Rules of Evidence
- J. Relevant Court Cases
 - 1. Frye vs. United States (1923)
 - 2. Daubert vs. Merrell Dow (1993)
 - 3. General Electric vs. Joiner (1997)
 - 4. Kumho Tire vs. Carmichael (1999)
 - 5. United States vs. Mitchell (2001)

4. REQUIRED READING:

- | | |
|---|--|
| <ul style="list-style-type: none"> A. Effective Expert Witnessing, B. Advances in Fingerprint Technology, C. Courtroom Testimony Techniques, D. Fingerprint Source Book, NIJ E. Handout LPE - #10.1 F. Handout LPE - #10.2 G. Handout LPE - #10.3 H. Handout LPE - #10.4 I. Handout LPE - #10.5 J. Handout LPE - #10.6 K. Handout LPE - #10.7 L. Handout LPE - #10.8 M. Handout LPE - #10.9 N. Handout LPE - #10.10 O. Handout LPE - #10.11 | <ul style="list-style-type: none"> Matson, Daou, Soper Chapters 1-7 Lee, Gaensslen Chapter 10 (2nd Edition) Ron Smith Chapters 13 & 14 |
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5. SUPPLEMENTAL READING:

- A. Scientific Evidence in Civil and Criminal Cases, Moenssens, Starrs, Henderson, Inbau
- B. Speaking as an Expert, McKasson, Richards
- C. Strengthening Forensic Science in the U.S.: A Path Forward, NAS Report

6. DISCUSSION TOPICS:

- A. What would you do in this situation? Case studies by Raymond Davis, situations from

LP APFIS Training Manual Effective Date: January 1, 2014	Approved by Laboratory Director Printed Copies are not Controlled Page 14 of 15
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actual court experiences.

7. TRAINING PRACTICAL:

- A. Preparation of curriculum vitae.
- B. Preparation of direct examination questions.
- C. Participation in an internal mock court scenario.

8. TRAINING STANDARD:

- A. Student must pass a written test.
- B. Student can view testimony by other examiners when possible.
- C. Student must have acceptable performance in the mock court.

Final: Examination and Moot Court

1. TRAINING HOURS: Twenty (20)

2. TRAINING PRACTICAL:

- A. The moot court will consist of a case worked during training.
- B. The final examination will consist of all aspects that have been covered during training.

3. TRAINING STANDARD:

- A. Upon successful completion of practical, moot court and final examination the trainee will be released for independent case work.