



MASTER DOCUMENT LIST

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Training Manual
Questioned Documents
Subject: Master Document List

DRN: QD-TM-MDL

Revision History

Version #	Effective Date	Brief Description of Change(s)
00	05/04/2007	Original Issue
01	02/27/2013	Minor Revision - Checklists
01a	08/22/2013	Changed from TOC to MDL
02	12/08/2017	Documents revised and renumbered Version numbers were removed from MDL
03	01/03/2018	Rescind: QD-TM-03
04	01/10/2019	Revised: QD-TM-03, LAB-QD-29



TRAINING PROGRAM OVERVIEW

1 Introduction

Individuals employed by the Texas Department of Public Safety as Questioned Document Examiners must meet specific qualifications as outlined in the Questioned Document Training Manual before being qualified to perform casework. The qualifications consist of educational requirements, general laboratory training requirements and forensic document training requirements.

2 Degree Requirements

An examiner/analyst shall have, at a minimum, a Baccalaureate degree from an accredited four-year college or university, preferably with courses in physical science, statistics, criminalistics, criminal justice, or a related field.

An examiner/analyst shall have successfully completed a qualifying test before beginning casework responsibilities.

3 Purpose

The Questioned Documents Training Manual is designed to provide the trainee with an overview to develop background, laboratory skills, education, competency, and supervised hands-on experience to adequately perform independent casework with minimal supervision. The Texas DPS training time is two years. Trainees having prior experience in questioned document analysis procedures may be evaluated to determine the amount of time necessary for training.

4 Assignment of Trainer

Meetings between the trainee, the trainer, and/or supervisor should be held on a regular basis in order to evaluate the trainee's progress, plan future study and practical assignments, and discuss any deficiencies which require additional training. The trainer will document the trainee's progress. The specific duration of each module is an approximation only and may be adjusted at the trainer's discretion.

5 Trainee Responsibilities

The trainee will be required to keep a training notebook. The training program covers information that requires the trainee to keep up with reading assignments on a self-study basis. The trainee is responsible for informing his/her trainer or supervisor when problems arise at any time during the training period.

6 Training and Competency Notebook

- A. During the training program, the trainee is responsible for keeping detailed records in a competency notebook of his/her training, practice testing, and progress. Completion of modules and/or practical exercises will be recorded, dated, and signed off by the trainer.
- B. The items that should be maintained in the training notebook include items listed on LAB-GLT-10 and any other document(s) relevant to the training program.

7 Questioned Documents Training Modules

7.1 Reading Assignments



Chapters and/or articles assigned for reading during training are present in the Questioned Document Section Library. Any modifications to the assigned reading will be documented in the training documentation and forwarded to the Quality Assurance Coordinator for approval.

7.2 Training Assessment

Training assessment will be undertaken as separate modules of training; the conclusion of training should take into consideration the following:

- A. All competency tests must be correctly analyzed
- B. The training and competency notebook is approved by the Trainer.
- C. The training and competency notebook, other training records documenting completion of training requirements, and trainee's credentials are reviewed.
- D. The trainee successfully completes a final comprehensive written exam.
- E. After satisfactory completion of training, a Certification of Competency should be issued and recommendation for Independent Work Authorization be submitted for casework analysis in the category of testing and/or relevant testing procedures.
- F. Since all casework is 100% verified, there is no supervised casework requirement in the Questioned Document section. However, while the examiner is performing casework during their first two years, they are closely monitored and must exhibit no errors during that time frame. If there are errors, they will be resolved, which may include additional training.

7.3 Relevant Testing Procedures (RTP) Assessment

During the trainee's two-year training program in the discipline, they may be authorized to perform Relevant Testing Procedures (RTPs) for casework analyses based on their satisfactory completion of training and competency in the RTP.

- A. Trainees must satisfactorily complete the following to be recommended to perform RTPs for casework:
 1. Completion of the required readings on the procedure
 2. Demonstration of the procedure and practical application of the procedure
 3. Competency testing
- B. Relevant Testing Procedures in the **Questioned Documents Examination** (Category of Testing)

These are the relevant testing procedures for which trainees will be trained and determined if competent prior to authorization to perform casework in the Questioned Documents Examination category of testing

1. Envelope Batch Matching
2. Paper Batch and Edge Matching
3. Examination and Preservation of Charred and Saturated Documents
4. Typewriting/Examination of Carbon Ribbon Evidence
5. Identification and Analysis of Conventional and Digital Print Processes
6. Examination by Video Spectral Comparator (VSC)



- a) *Hyperspectral Imaging (HSI)*
 - b) *Alteration / Erasure / Obliteration Restoration*
 - c) *Inks and Writing Instruments*
- 7. Miscellaneous Document Examinations
 - 8. Latent Writing Impression Development / ESDA

C. Relevant Testing Procedures in the **Handwriting Examination** (Category of Testing)

This category includes the examination and comparison of handwriting / hand printing.

8 Evaluation of Training Program

The trainee will complete the Laboratory Training Program Evaluation Form (LAB-QA-21) upon completion of the training program.



Revision History

Version #	Effective Date	Brief Description of Change(s)
00	05/04/2007	Original Issue
01	02/27/2013	Minor Revision – Update reading lists
02	12/08/2017	Original Issue This document was formerly QD-TM-00 QD-TM-01 was formerly “Fundamentals of Questioned Documents”



FUNDAMENTALS OF FORENSIC DOCUMENT EXAMINATION

Duration 2 weeks

Purpose To acquaint the trainee with the fundamentals of forensic document examination

Prerequisite None

1 Objectives

Theoretical

The trainee will gain a working knowledge of equipment and procedures required to perform forensic document examinations. Obtain general knowledge of document examination, forms used in casework and daily operations of the Questioned Documents Section.

1.1 Practical

Following the completion of the module the trainee will be able to:

- A. Describe the evolution of forensic questioned document laboratories
- B. Articulate when questioned document examinations can be applied
- C. Describe the care of questioned documents
- D. Describe how the section handles evidence
- E. Describe and mark evidence
- F. Perform evidence itemization in LIMS
- G. Define terminology used in the Questioned Documents Section
- H. Use Stereo microscope

2 Training Outline

2.1 Lesson Plan

- A. History of the Examination of Questioned Documents and Handwriting Identification
- B. Handling, care, marking, and itemization of evidence
- C. Questioned Documents Terminology
- D. Use of Stereozoom microscope

2.2 Required Readings

The required readings should be completed within two years.

- A. Forensic Document Examination- Lewis
- B. The Scientific Examination of Questioned Documents- Kelly & Lindblom
- C. Foundations of Forensic Document Analysis- Allen
- D. The Scientific Examination of Documents- Ellen
- E. Suspect Documents- Harrison
- F. The Problem of Proof- Osborn
- G. Questioned Document Problems- Osborn



- H. Evidential Documents- Conway
- I. Scientific Examination of Questioned Documents- Hilton
- J. Education and Qualifications of Examiners of Questioned Documents, JFS, Vol. 1, No. 3, pp. 35-42, July 1956
- K. Ethics and the Document Examiner Under The Adversary System, JFS, Vol. 21, No. 4, pp. 779-783, October 1976
- L. Professionalism of Document Examiners: Problems of Certification and Training, JFS, Vol. 18, No.4, pp. 460-468, October 1973
- M. The Evolution of Questioned Document Examination in the Last 50 years, JFS, Vol. 33, No. 6, pp. 1310-1318, Nov. 1988
- N. Examination of a Document Case, JFS, Vol. 10, No. 4, pp. 433-440, Oct. 1965
- O. History of Questioned Document Examination in the United States, JFS, Vol. 24, No. 4, pp. 890-897, 1979
- P. DNA Analysis and Document Examination: The Impact of Each Technique on Respective Analyses, JFS, Vol. 61, No. 1, pp. 26-34, January 2016
- Q. Landmark Questioned Document cases, section document
- R. Questioned Documents Standard Operating Procedures

2.3 Practical Exercise

The trainee will complete the microscope and basic terminology practical exercises.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises. The trainee and trainer will complete the checklist upon completion of the module.

3.1 Competency Test

No competency test for this module.



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00	05/04/2007	Original Issue
01	02/27/2013	Minor Revision – Update reading lists
02	12/08/2017	Major Revision – Title and content QD-TM-03 was formerly “Principles of Photography” Content was previously in QD-TM-01



REPORT WRITING AND CASE REVIEW

Duration	2 to 3 weeks
Purpose	To educate the trainee on how to accurately review the work of their peers and to establish knowledge in report writing including appropriate terminology and interpretation of analysis
Prerequisite	QD-TM-01 and QD-TM-02

1 Objectives

1.1 Theoretical

Each discipline will issue a laboratory report for each request that is made in the Laboratory Information Management System (LIMS). The laboratory report is used to communicate with the customer the results of the analysis as well as any investigative leads that will assist in future or further examinations. The laboratory report should be easy to understand for any non-scientific reader, but should also encapsulate the examination process as well as the scientific data obtained from those processes. All results and conclusions must be supported in the case documentation and work product(s) of the analyst. A review of the case record is performed through a verification process that includes both a technical and administrative review. In the Questioned Documents discipline, there is 100% verification of all casework.

A. Technical review

The technical review will be completed by another individual who has been competency tested and is authorized to perform the task. The technical review process is an evaluation of the documentation to ensure accuracy and completeness. There should be an evaluation of the report(s), physical evidence submitted, work products (where applicable), worksheets, and notes. The verifying analyst should be able to reach his/her own independent conclusion, which will then be compared the case analyst's conclusion.

B. Administrative review

The administrative review will be completed by the same experienced examiner that is performing the technical review as part of the verification process. The administrative review should be performed in order to check for accuracy, grammar and punctuation. All documentation and the report should be administratively reviewed.

1.2 Practical

Following the completion of the training module the trainee will be able to:

- A. Produce a report in the correct format that is easy to understand
- B. Review another analyst's work in order to establish a similar opinion
- C. Verify, technically and administratively review a Questioned Documents case

2 Training Outline

2.1 Lesson Plan

- A. Questioned Documents Reports



1. Translation of submission form into LIMS
2. Sections of the report
3. Exam count

B. Technical Review

1. The technical review is performed on the final draft
2. A copy of the report, the disclosure form and statement of qualifications from the analyst should be printed.
3. The report should have an accurate listing of the evidence, the conclusions, the investigative leads, and the disposition of the evidence, and it should be within the limits of the examination performed and analyst's work product.
4. The report should be properly and clearly communicated to the customer.

C. Administrative Review

1. The administrative review is performed on the final draft.
2. The review should check for accuracy in the use of grammar and punctuation and/or any other editorial errors.

2.2 Required Readings

- A. Questioned Documents Standard Operating Procedures, specifically QD-01-05
- B. TXDPS Crime Laboratory – Laboratory Operations Guide, specifically LOG-03-03, LOG-03-11, LOG-03-16, LOG-04-01, LOG-04-02, LOG-04-03
- C. TXDPS Crime Laboratory – LIMS Manual (current version)
- D. Scientific Working Group for Forensic Document Examination (SWGDOC) – Standard Terminology for Expressing Conclusions for Forensic Document Examiners and Terminology Relating to the Examination of Questioned Documents

2.3 Observed Performance

The trainee will observe a competent case analyst perform a verification of a completed case from start to finish.

2.4 Supervised Performance

- A. Trainee will complete a mock report with case information provided by the trainer.
- B. Trainee will complete technical and administrative review of a mock report and case record.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency

The trainee will complete the comprehensive Questioned Document examination at the end of the two-year training program.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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00		Original Issue
01	02/27/2013	Minor Revision
	01/03/2018	Rescinded
02	01/10/2019	Major Revision – Title and content QD-TM-03 was formerly “Principles of Photography”



INTRODUCTION TO HANDWRITING EXAMINATION

Duration 3 weeks

Purpose To acquaint the trainee with the fundamental principles and the theory of handwriting identification

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain general knowledge of the fundamental principles and the theory of handwriting identification.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Define handwriting and how it is taught and applied
- B. Discuss general principles of handwriting
- C. Discuss handwriting systems and advancement of alphabet
- D. Discuss methodologies of handwriting
- E. Discuss theory of handwriting identification

2 Training Outline

2.1 Lesson Plan

- A. What is handwriting?
- B. Origin of the alphabet/systems of handwriting
- C. History of teaching handwriting
- D. Theory of handwriting identification
- E. Methodology

2.2 Required Readings

- A. The 26 Letters- Ogg
- B. Questioned Documents- Osborn
- C. Handwriting Identification: Facts and Fundamentals- Huber & Headrick
- D. Forensic Handwriting Identification- Morris
- E. Handwriting Identification and Graphology, JFS, Vol. 9, No. 4, February 1964, pp. 477-484.
- F. The Questioned Document Expert: Skilled Specialist or Pseudoscientist, International Journal of Forensic Document Examiners, Vol. 2, No. 4, Oct./Dec. 1996, pp. 284-287.
- G. Perception and Handwriting Identification, JFS, Vol. 12, No. 1, Jan. 1967, pp.102-111.
- H. Forensic Examination of Peculiar Writing Systems, JFSS, Vol. 13, 1973, pp. 143-152.
- I. Departure from Handwriting System, JFS, Vol. 17, No. 1, 1971, pp. 107-123.



2.3 Practical Exercises

The trainee will complete Introduction to Handwriting Examination and Terminology of Letters And Features practical exercises.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency Test

The trainee will complete the comprehensive Questioned Documents Examination at the end of the two-year training program.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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CHARACTERISTICS OF HANDWRITING IDENTIFICATION

Duration 3 weeks

Purpose To acquaint the trainee with the aspects of handwriting identification

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain a working knowledge of the characteristics involved with handwriting identification.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Explain skill level
- B. Identify and describe natural variation
- C. Identify and describe class characteristics
- D. Identify and describe individual characteristics
- E. Identify and describe extrinsic and intrinsic factors

2 Training Outline

2.1 Lesson Plan

- A. Skill Level
- B. Natural Variation
- C. Class v. Individualistic characteristics
- D. Extrinsic Factors
- E. Intrinsic Factors

2.2 Required Readings

- A. Investigation of Class Characteristics in English Handwriting of the Three Main Racial Groups: Chinese, Malay and Indian in Singapore, JFS, Vol. 50, No. 1, Jan. 2005, pp. 177-184.
- B. Frequency of Certain Characteristics in Handwriting, Pen-Printing of Two Hundred People, JFS, Vol. 8, No. 2, April 1963, pp. 250-259.
- C. A Study of Handwritings by Twins and Other Persons of Multiple Births, JFS, Vol. 5, No. 1, Jan. 1960, pp. 121-131.
- D. Was This Document Written with the Left Hand?, Vol. 6, No. 3, July 1961, pp. 321-330.
- E. Opposite-Hand Writings, JFS, Vol. 13, No. 3, July 1968, pp. 376-389.
- F. Some Aspects of Normal Behavior: Their Use in Understanding Problems Encountered by Document Examiners, JFS, Vol. 21, No. 1, Jan. 1976, pp. 201-207.
- G. Drugs and Questioned Document Problems, JFS, Vol. 6, No. 1, Jan. 1961, pp. 76-87.



- H. Effects of Drugs on Handwriting, JFS, Vol. 10, No. 3, July 1965, pp. 335-346.
- I. A Study of the Influence of Alcohol on Handwriting, JFS, Vol. 14, No. 3, July 1969, pp.309-316.
- J. Handwriting by the Blind, JFS, Vol. 12, No. 1, Jan. 1967, pp. 37-59.
- K. Influence of Age and Illness on Handwriting: Identification Problems, Forensic Science, Vol. 9, 1977, pp. 161-172.
- L. Consideration of the Writer's Health in Identifying Signatures and Detecting Forgery, JFS, Vol. 14, No. 2, April 1969, pp. 157-166.
- M. The Investigation of Suicide Notes, JFS, Vol. 5, No. 1, Jan. 1960, pp. 48-71.
- N. Characteristics of Automatic Writing During A State of Trance, Forensic Science, Vol. 3, 1974, pp. 129-134.
- O. Handwriting and the Mentally Ill, JFS, Vol. 7, No. 1, Jan. 1962, pp. 131-139.

2.3 Practical Exercise

The trainee will complete Handwriting practical exercises #1-3.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency Test

The trainee will complete the comprehensive Questioned Documents Examination at the end of the two year training program.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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GENUINE HANDWRITING

Duration 3 weeks

Purpose To acquaint the trainee with features of genuine and non-genuine handwriting

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain a working knowledge of how to distinguish between genuine and non-genuine handwriting characteristics.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Articulate evidence of genuineness
- B. Articulate evidence of disguise
- C. Articulate evidence of forgery
- D. Describe conditions which may produce abnormal handwriting

2 Training Outline

2.1 Lesson Plan

- A. Forgery
- B. Disguise
- C. Simulation
- D. Accidentals/fundamental difference

2.2 Required Readings

- A. Ames on Forgery- Ames
- B. Forgery Detection- Harrison
- C. Forgeries Over Genuine Signatures, JFS, Vol. 14, No. 4, Oct. 1969, pp. 463-468.
- D. Multiple Forgeries, JFS, Vol. 4, No. 2, April 1959, pp. 209-214.
- E. Synthetic Signatures, JFS, Vol. 10, No. 1, Jan. 1965, pp. 77-85.
- F. Dynamic Characteristics of Signatures: Effects of Writer Style on Genuine and Simulated Signatures, JFS, Vol. 60, No. 1, Jan. 2015, pp. 89-94.
- G. Disguised Signatures, Journal of the Chartered Society of Forensic Sciences, Vol. 18, 1978, pp. 25-29.
- H. The Question of Disguise in Handwriting, JFS, Vol. 23, No. 1, Jan. 1978, pp. 149-154.
- I. Disguised Handwriting, JFS, Vol. 15, No. 4, Oct. 1970, pp. 476-488.
- J. Simulation Detection in Handwritten Documents by Forensic Document Examiners, JFS, Vol. 60, No. 4, July 2015, pp. 936-941.



2.3 Practical Exercise

The trainee will complete Handwriting practical exercises #4-7.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency Test

The trainee will complete the comprehensive Questioned Documents Examination at the end of the two year training program.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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EXAMINATION AND COMPARISON OF HANDWRITING EVIDENCE

Duration 2 years (to be performed concurrent with other modules)

Purpose To acquaint the trainee with the process of a handwriting examination and the necessary elements for an identification or elimination

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain a working knowledge of how to distinguish between genuine and non-genuine handwriting characteristics.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Describe the fundamentals of the identification process
- B. Discuss the general principles of the identification process
- C. Identify and describe requirements for standards for comparison
- D. Conduct the identification process
- E. Discuss and explain the conclusions of the identification process
- F. Discuss errors that may occur in the identification process

2 Training Outline

2.1 Lesson Plan

- A. Fundamentals of the Identification Process
- B. Standards for comparison
- C. Requirements
- D. Conclusions
- E. Errors that can occur

2.2 Required Readings

- A. The Standardization of Handwriting Opinion Terminology, JFS, Vol. 36, No. 2, March 1991, pp. 311-319.
- B. Do Experts Frequently Disagree?, JFS, Vol. 18, No. 4, Oct. 1973, pp. 455-459.
- C. Inconclusive Opinions: Refuge of the Questioned Document Examiner, JFS, Vol. 35, No. 4, July 1990, pp. 938-946.
- D. Court Ordered Handwriting Exemplars- How Effective?, JFS, Vol. 18, No. 4, Oct. 1973, pp. 448-454.
- E. Handwritten Entry Research, JFS, Vol. 24, No. 2, April 1979, pp. 503-510.
- F. The Collection of Writing Standards in Criminal Investigation, Journal of Criminal Law and Criminology, Vol. 32, No. 2, 1941, pp. 241-256.



Training Manual

Questioned Documents

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- G. Obtaining Document Standards for Comparison, Journal of Criminal Law and Criminology, Vol. 40, No. 1, 1949, pp. 105-108.
- H. Admissibility of Standard Writings, JFS, Vol. 10, No. 4, Oct. 1965, pp. 441-445.
- I. Writing Machines, Forensic Science International, Vol. 13, 1979, pp. 1-14.
- J. An Evaluation of Line Quality in Photocopied Signatures, ASQDE, 1996, Dawson and Lindblom.

2.3 Practical Exercises

The trainee will complete Handwriting practical exercises #8-10.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency Test

The trainee will complete the comprehensive Questioned Documents Examination at the end of the two year training program.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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PAPER BATCH AND EDGE MATCHING

Duration 1 month

Purpose To acquaint the trainee with theories and methodologies concerning the examination of paper and knowledge of edge matching

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the physical properties of paper, how to conduct examinations of paper evidence and how to conduct edge/fracture matching comparisons.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of questioned documents to known documents
- B. Compare torn edges, perforations, and fractures
- C. Assemble torn or shredded documents

2 Training Outline

2.1 Lesson Plan

- A. Paper Manufacturing
- B. Physical Properties of Paper
- C. Security Paper & Security Features
- D. Destructive and Non-Destructive Testing
- E. Limitations of Paper Evidence
- F. Importance of Paper Fibers
- G. Edge Matching

2.2 Required Readings

- A. The Role of Paper in Questioned Document Work, JFSS, Vol. 13, No. 2, pp. 91-95, April 1973.
- B. The Examination of Torn and Perforated Documents, Canadian Society Forensic Science Journal, Vol. 15, No. 3/4, pp. 116-132, Aug. 1982.
- C. Striation Evidence in Counterfeiting Cases, JFS, Vol. 28, No. 2, pp. 360-371, April 1983.
- D. The Shredded Paper Puzzle: The Reconstruction of Shredded Documents, Journal of Forensic Document Examiners, Vol. 4, No. 3, pp. 273-279, July/Sept. 1998.
- E. The Comparison of Class Characteristics Among Several Crosscut Shredders, Journal of ASQDE, Vol. 16, No. 1, pp. 3-15, June 2013.
- F. An "Ideal" Methodology for Manually Assembling Crosscut Shredded Documents, Journal of ASQDE, Vol. 16, No. 1, pp. 17-29, June 2013.



- G. Edge Characteristics of Commercially Produced Paper Stock, Journal of ASQDE, Vol. 1, No. 1, pp. 57-66, June 1998.
- H. Positive Identification of Torn Burned Matches with Emphasis on Crosscut and Torn Fiber Comparisons, JFS, Vol. 28, No. 2, pp. 351-359, April 1983.

2.3 Practical Exercise

The trainee will complete the Paper Batch and Edge Matching practical exercise.

The trainee will complete Handwriting practical exercises #11 and #12.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Paper Batch and Edge Matching competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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ENVELOPE BATCH MATCHING

Duration 1 month

Purpose To acquaint the trainee with theories and methodologies concerning the examination of envelopes and envelope batch matching

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of an envelope examination. Envelopes are important in Questioned Document casework, especially in anonymous communication. It is important the trainee understand the physical properties of envelopes and the manufacturing defects that can help facilitate a batch match. Moreover, the trainee should understand the postal features on envelopes and what impact they have on an envelope examination.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of questioned documents and known documents
- B. Compare features of questioned and known documents

2 Training Outline

2.1 Lesson Plan

- A. Envelope Manufacturing
- B. Physical Properties of Envelopes
- C. Manufacturing Defects in Envelopes
- D. Postal Features

2.2 Required Readings

- A. The Envelope: Its Origin, Development and Manufacture; United States Envelope Company, pp. 1-43, 1948/1957.
- B. The Ubiquitous Envelope, William H. Bureau, No. 0239122.
- C. Envelope Association Through Manufacturing Characteristics, JFS, Vol. 22, No. 4, pp. 815-818.
- D. Authentication or Refutation of Envelope Evidence, International Journal of Forensic Document Examiners, Vol. 1, No. 3, pp. 168-174.
- E. Anonymous Communications, JFS, Vol. 4, No. 3, pp. 378-381, July 1959.
- F. Mechanical Addressing Methods, JFS, Vol. 21, No. 2, pp. 422-426, April 1976.
- G. The Comparison and Identification of Adhesives on Questioned Documents, JFS, Vol. 11, No. 1, pp. 28-42, Jan. 1966.
- H. Paper Tapes and Labels Encountered in Document Examination, JFS, Vol. 11, No. 4, pp. 496-506, Oct. 1966.



- I. The Examination of Commercial Printing Defects to Assess Common Origin, Batch Variation, and Error Rate, JFS, Vol. 55, No. 1, pp. 136-140, Jan. 2010.
- J. Examination of Anonymous Letters, unpublished technical PowerPoint provided by Bonnie L. Beal and Courtney King, ASQDE 2013.

2.3 Practical Exercise

The trainee will complete the Envelope Batch Matching practical exercise.

The trainee will complete Handwriting practical exercises #13 and #14.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Envelope Batch Matching competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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EXAMINATION AND PRESERVATION OF CHARRED AND SATURATED DOCUMENTS

Duration 1 month

Purpose To acquaint the trainee with theories and methodologies concerning the examination of charred/saturated documents and preservation of those documents

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of charred and saturated documents, how to examine them and how to preserve the integrity of these fragile documents.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Evaluate and discuss the condition of the documents and determine what examinations might prove beneficial
- B. Identify the best practices for preserving the integrity of the documents

2 Training Outline

2.1 Lesson Plan

- A. Condition and Examination
- B. Preservation

2.2 Required Readings

- A. Charred Documents, Their Handling and Decipherment, Journal of Criminal Law and Criminology, Vol. 43, No. 6, pp. 812-826, 1953.
- B. Decipherment of Charred Documents, Journal of Criminal Law and Criminology, Vol. 38, No. 5, pp. 542-546, Jan./Feb. 1948.
- C. Report on the Reconstruction of Two Time Payment Ledgers Damaged by Fire and Water, Journal of Criminal Law and Criminology, Vol. 50, No. 3, pp. 291-295, Sept./Oct. 1959.
- D. A Charred Document Case Made Easy, International Journal of Forensic Document Examiners, Vol. 2, No. 4, pp. 347-353, Oct./Dec. 1996.
- E. Writing Obscured by Bloodstains, William L. Leaver, SAFDE, Oct. 1992.

2.3 Practical Exercise

The trainee will complete the Charred and Saturated Documents practical exercise.

The trainee will complete Handwriting practical exercises #15 and #16.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.



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3.1 Competency Test

The trainee will complete the Charred and Saturated Documents competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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TYPEWRITING/EXAMINATION OF CARBON RIBBON EVIDENCE

Duration 1 month

Purpose To provide the trainee with a working knowledge of factors involved in carbon ribbon examination

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of how to correctly remove the carbon ribbon, examine portions of the carbon ribbon and compare characters from the carbon ribbon to the corresponding documents.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Discuss the history of typewriter manufacturer and design
- B. Describe the individualizing characteristics created through wear and damage
- C. Analyze and transcribe the carbon ribbon

2 Training Outline

2.1 Lesson Plan

- A. History of the Typewriter
- B. Identification/differentiation of typewriters
- C. Typewriter Ribbons

2.2 Required Readings

- A. I.B.M. Correcting Selectric Typewriter: An Analysis of the Correctable Film Ribbon in Altering Typewritten Documents, JFS, Vol. 21, No.1, pp. 208-212, Jan. 1976.
- B. Typewriting Impressions: Testing and Differentiation by Chromatographic Adsorption, JFS, Vol. 3, No.4, pp. 431-433, Oct. 1958.
- C. Paper Fiber Impressions on Carbon Tape Ribbons. JFS, Vol. 19, No.1, pp. 136-141, Jan. 1974.
- D. Identification of Indented Typewritten Entries with Characters Present on a Lift-Off Correction Ribbon, JFS, Vol. 37, No. 6, pp. 1610-1620, November 1992.
- E. Methods of Associating Typewriter Ribbons and Correcting Tapes with a Questioned Text, JFS, Vol. 34, No. 5, Sept. 1989.
- F. Platen Information Revealed: A Technique for Locating Latent Text on Typewriter (or Printer) Platens, JFS, Vol. 39, No. 1, pp. 223-225, January 1994.

2.3 Practical Exercise

The trainee will complete the Carbon Ribbon Evidence practical exercise.

The trainee will complete Handwriting practical exercises #17 and #18.



3 Conclusion

3.1 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.2 Competency Test

The trainee will complete the Carbon Ribbon Evidence competency test.

3.3 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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00	12/08/2017	Original Issue Content was previously in QD-TM-11



LATENT WRITING IMPRESSION RESTORATION

Duration 1 month

Purpose To acquaint the trainee with the development of latent writing impressions

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge on how to develop latent writing impressions and what evidentiary value they add to the examination of questioned documents.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Have a working knowledge of the oblique fiber-optic lighting technique
- B. Have a working knowledge of the Electrostatic Detection Apparatus (ESDA)
- C. Discuss the limitations of developing Latent Writing Impressions (LWI)

2 Training Outline

2.1 Lesson Plan

- A. Oblique Fiber-optic Lighting
- B. Electrostatic Detection Apparatus (ESDA)
- C. Limitations in Latent Writing Impressions (LWI)

2.2 Required Readings

- A. Indentations and Anonymous Letters, JFS, Vol. 9, No. 2, pp. 265-270, April 1964.
- B. The Decipherment of Impressions in Paper- Some Methods Old and New, JFSS, Vol. 13, No. 83, pp. 83-90, 1973.
- C. An Electrostatic Imaging Technique for the Detection of Indented Impressions in Documents, Forensic Science International, Vol. 13, pp. 51-54, 1979.
- D. Optimum Conditions for Examination of Documents Using an Electrostatic Detection Apparatus (ESDA) device to Visualize Indented Writings, JFS, Vol. 28, No. 3, pp. 697-712, 1983.
- E. Application of Experimental Variables to the Use of the Electrostatic Detection Apparatus, JFS, Vol. 28, No. 4, pp. 901-910, October 1983.
- F. How Long After Writing Can An ESDA Image Be Developed?, Forensic Science International, Vol. 39, pp. 119-125, 1988.
- G. The Electrostatic Detection Apparatus (ESDA) and Its Effects on Latent Prints on Paper, JFS, Vol. 33, No. 2, pp. 357-377, March 1988.
- H. The Effects of the Relative Humidity and Temperature on the Efficiency of the ESDA Process, International Journal of Forensic Document Examiners, Vol. 2, No. 3, pp. 209-213, July/September 1996.



- I. Sequencing Writing Impressions and Laser Printing or Inkjet Printing Using the ESDA, Journal of ASQDE, Vol. 1, No. 1, pp. 40-42, 1998.
- J. Survey of Techniques Used to Visualize Indented Markings, Journal of ASQDE, Vol. 1, No. 2, pp. 107-111, 1998.
- K. Using the ESDA to Visualize Typewriter Indented Markings, Journal of ASQDE, Vol. 1, No. 2, pp. 113-116, 1998.
- L. Practical Implications of Charge Transport Model for Electrostatic Detection Apparatus (ESDA), JFS, Vol. 44, No. 4, pp. 832-836, 1999.
- M. A Method for Determining the Condition of an ESDA or IMEDD, Journal of ASQDE, Vol. 2, No. 2, pp. 97-101, 1999.
- N. ESDA Cascade Developer Awareness, Journal of ASQDE, Vol. 2, No. 2, pp. 102-103, 1999.
- O. Choosing Cascading Beads for the Electrostatic Detection Apparatus, Journal of ASQDE, Vol. 3, No. 2, pp. 85-90, 2000.
- P. Secondary Impressions, Journal of ASQDE, Vol. 4, No. 1, pp. 3-11, 2001.
- Q. ESDA Effects in Light of Current Discussions, Journal of ASQDE, Vol. 7, No. 1, pp. 7-21, 2004.
- R. Electrostatic Detection of Secret Writings, Forensic Science International, Vol. 41, pp. 17-23, 1989.

2.3 Practical Exercise

The trainee will complete the Latent Writing Impression Restoration practical exercise.

The trainee will complete Handwriting practical exercises #19 and #20.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Latent Writing Impression Restoration competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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SPECIAL INSTRUMENTATION TECHNIQUES

Duration 1 month

Purpose To acquaint the trainee with common instrumentation that aids in forensic document examination

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of instrumentation used in conducting forensic document examination.

1.2 Practical

Following the completion of module the trainee will have:

- A. Working knowledge of the Video Spectral Comparator (VSC)
- B. Working knowledge of Zarbeco MiScope
- C. Working knowledge of computer imaging software (Adobe Photoshop)

2 Training Outline

2.1 Lesson Plan

- A. Video Spectral Comparator (VSC)
- B. Zarbeco MiScope
- C. Computer imaging software (Adobe Photoshop)

2.2 Required Readings

- A. Advances in the Forensic Analysis and Dating of Writing Ink- Brunelle and Crawford: pp. 56-71.
- B. "Optical Contrasters", A New Instrumental Aid in Deciphering Faint Writings and Other Low-Contrast Evidence, JFS, Vol. 12, No. 3, pp. 370-375, July 1967.
- C. Use of Diapositives in Document Examination, JFS, Vol. 9, No. 4, pp. 520-527, October 1964.
- D. Ink Differentiation with Infrared Techniques, JFS, Vol. 18, No. 4, pp. 418-433, October 1973.
- E. The Application of Electronic Video Techniques to Infrared and Ultraviolet Examinations, JFS, Vol. 22, No. 1, pp. 53-60, January 1977.
- F. Infrared Luminescence in the Examination of Documents, JFSS, Vol. 10, No. 3, pp. 159-164, July 1970.
- G. Selective Wavelength Examination Applied to Ink Differentiation Problems, JFS, Vol. 9, No. 1, pp. 100-106, January 1964.
- H. Invisible Ultraviolet Fluorescence, JFS, Vol. 10, No. 3, pp. 368-375, July 1965.
- I. Colour in Document Examination, JFSS, Vol. 17, No. 3, pp. 3-8, January 1977.
- J. The Examination of Color, JFS, pp. 313-317, 1971.



- K. Some Applications of Color Photography to Questioned Document Problems, JFS, Vol. 5, No. 2, pp. 141-147, April 1960.
- L. Use of Image Processing to Enhance IR/UV Images From VSC-1¹, International Journal of Forensic Document Examiners, Vol. 2, No. 3, pp. 235-241, July/September 1996.
- M. Infrared Luminescence Using Glass Fibers, JFS, Vol. 9, No. 1, pp. 89-99, January 1964.
- N. A Comparative Analysis of Dichroic Filter Viewing, Reflected Infrared and Infrared Luminescence Applied to Ink Differentiation Problems, JFS, Vol. 15, No. 3, pp. 357-363, July 1970.
- O. Unusual Photographic Techniques in Document Examination, Forensic Science, Vol. 7, pp. 23-29, 1976.
- P. Using the Video Spectral Comparator in the Comparison of Carbon Copies and Carbon Paper Impressions, JFS, Vol. 40, No. 2, pp. 296-299, March 1995.
- Q. Infrared Luminescence of Indented Writing as Evidence of Document Alterations, JFS, Vol. 42, No. 4, pp. 729-733, 1997.
- R. A Review of Spectrometer and Chromaticity Capabilities of the VSC 2000, Journal of ASQDE, Vol. 2, No. 2, pp. 90-93, 1999.
- S. Light, Color, and Filters- William J. Flynn.
- T. Foster + Freeman VSC-6000/HS User and Application Guide.

2.3 Practical Exercise

The trainee will complete the Special Instrumentation Techniques practical exercise.

The trainee will complete Handwriting practical exercises #21 and #22.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Special Instrumentation Techniques competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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ALTERATIONS/OBLITERATIONS/ERASURES

Duration 1 month

Purpose To acquaint the trainee with the methodologies of revealing alterations, obliterations and erasures on documents

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the methods and techniques commonly used to alter, obliterate and erase writing on documents and how to restore the legibility of the original writings or to detect their presence.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform techniques to visualize alterations, obliterations and erasures
- B. Determine origin and authenticity
- C. Discuss methods and techniques commonly used to alter, obliterate and erase writings
- D. Practice methods of detecting and deciphering alterations, obliterations and erasures
- E. Articulate conclusions which may be derived from the examinations

2 Training Outline

2.1 Lesson Plan

- A. Equipment and light sources
- B. Alterations
- C. Obliterations
- D. Erasures

2.2 Required Readings

A Technique for the Detection of Alterations to a Document from a Carbonless Copying System, JFSS, Vol. 17, No. 9, pp. 9-12, 1977.

2.3 Practical Exercise

The trainee will complete the Alterations/Obliterations/Erasures practical exercise.

The trainee will complete Handwriting practical exercises #23 and #24.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Alterations/Obliterations/Erasures competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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INKS AND WRITING INSTRUMENTS

Duration 1 month

Purpose To acquaint the trainee with a working knowledge of the analysis of writing instruments and inks

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of writing instruments and inks.

1.2 Practical

Following the completion of the module the trainee will be able to:

- A. Discuss the history of inks and writing instruments
- B. Articulate the composition of inks and their manufacture
- C. Articulate the composition of pencils
- D. Discuss the identifying features of writing instruments

2 Training Outline

2.1 Lesson Plan

- A. History of inks and writing instruments
- B. Identifying the type of writing instrument

2.2 Required Readings

- A. A Scientific Study of Pencil Lead Components, JFS, Vol. 23, No. 4, pp. 643-661, Oct., 1978.
- B. The Parameters of Ballpen Ink Examinations, JFS, Vol. 21, No. 4, pp. 917-922, Oct., 1976.
- C. Differentiation of Blue Ballpoint Pen Inks, Journal of Criminal Law and Criminology, Vol. 52, No. 3, pp. 338-343, Sept/Oct 1961.
- D. Composition, Properties, and Behavior of Ball Pens and Inks, Journal of Criminal Law and Criminology, Vol. 45, No. 6, pp. 743-747, 1955.
- E. The Ballpoint Pen Striation Patterns as Evidence in Document Examination, ASQDE, September 1985.
- F. Determination of the Direction of Ball-point Pen Motion from the Orientations of Burr Striations in Curved Pen Strokes, JFS, Vol. 25, No. 2, pp. 386-389, April 1980.
- G. The Direction of Ballpoint Penstrokes in Left- and Right-handed Writers as Indicated by the Orientation of Burr Striations, JFSS, Vol. 22, pp. 271-274, 1982.
- H. Striation Patterns in New and Used Ball Point Pens, ASQDE, August 2002.
- I. Possible Causes of inkless striations in ball point pen strokes, Khanmy, A. and Roos, L., ASQDE.



- J. Identifying Ball Pens by the Burr Striations, *The Journal of Criminal Law, Criminology and Police Science*, Vol. 61, No. 2, pp. 280-282, 1970.
- K. Fiber Tipped Pens, *The Journal of Criminal Law, Criminology and Police Science*, Vol. 57, No. 4, pp. 521-525, 1967.
- L. The Autopen, *JFS*, Vol. 18, No. 4, pp. 441-447, October 1973.
- M. A Critical Evaluation of Current Ink Dating Techniques, *JFS*, Vol. 32, No. 6, pp. 1522-1536, November 1987.
- N. Disappearing Inks: Its Use, Abuse and Detection, *JFS*, Vol. 35, No. 1, pp. 199-203, January 1990.
- O. An Introduction to the Gel Pen, *JFS*, Vol. 41, No. 3, pp. 503-504, May 1996.

2.3 Practical Exercise

The trainee will complete the Ink and Writing Instruments practical exercise.

The trainee will complete Handwriting practical exercises #25 and #26.

3 Assessment

The trainee will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Ink and Writing Instruments competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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SPECTRAL EXAMINATION OF INK (HSI)

Duration 1 month

Purpose To acquaint the trainee with the examination of ink using spectral imaging

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the hyperspectral imaging (HSI) portion of the VSC and will understand how to differentiate between inks. The trainee will understand how to determine results with the support of the chromaticity chart and spectrometer.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Use HSI feature
- B. Read results of chromaticity chart and spectrometer

2 Training Outline

2.1 Lesson Plan

- A. Selecting relevant light sources
- B. Recording spectra
- C. Setting parameters
- D. Loading graph
- E. Viewing spectra screen
- F. Interpretation of spectra- chromaticity chart and spectrometer

2.2 Required Readings

- A. Towards Automated Hyperspectral Document Image Analysis, 2013.
- B. Quantitative Hyperspectral Imaging of Historical Documents: Technique and Applications, 2008.
- C. Foster + Freeman VSC-6000/HS User and Application Guide. Current Version.

2.3 Practical Exercise

The trainee will complete the Spectral Examination of Ink practical exercise.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Spectral Examination of Ink competency test.

The trainee will complete Handwriting practical exercises #27 and #28.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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00	12/08/2017	Original Issue



IDENTIFICATION AND ANALYSIS OF CONVENTIONAL AND DIGITAL PRINT PROCESSES

Duration 1 month

Purpose To acquaint the trainee with the theories and methodologies concerning the identification and analysis of conventional and digital print processes

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge on how to identify a printing process based on macroscopic and microscopic printing features and on determining whether or not two or more documents were produced by the same printing unit.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Have a working knowledge of the printing features that are associated with a print process
- B. Determine if two or more documents were produced by the same printing unit based on the examination of class and individual characteristics of the documents
- C. Determine if a document was produced by a particular printing unit

2 Training Outline

2.1 Lesson Plan

- A. Types of print processes and features associated with each
- B. Defects of print processes

2.2 Required Readings

- A. Handbook of Print Media- Helmut Kipphan: Chapters 1, 2, 3 (pages 493-499) & 5.
- B. Pocket Pal "The Handy Book of Graphic Arts Production": Pages 8-34, 120-172.
- C. The Office Copying Revolution- Ian Batterham: Chapters 1, 2, 6, 9, 10 & 11.
- D. Printing Processes Manual: New Zealand Police- Walsh, D. and James, T.
- E. Printed Matter as Questioned Documents, JFS, Vol. 12, No. 1, pp. 82-101, January 1967.
- F. Identifying the Copying Machine Used in Preparation of Simulated Forgeries, JFS, Vol. 18, No. 4, pp. 410-413, 1973.
- G. Detecting Fraudulent Photocopies, Forensic Science International, Vol. 13, pp. 117-123, 1979.
- H. Classification and Identification of Photocopiers: A Progress Report, JFS, Vol. 21, No. 4, pp. 923-931, Oct. 1976.
- I. Characterization of Printing Characteristics of Color-Photocopied and Laser-Printed Documents, Journal of Forensic Identification, Vol. 66, No. 2, pp. 155-170, 2016.



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- J. Automatic Counterfeit Protection System Code Classification- Beusekom, Schreyer, and Breuel.

2.3 Practical Exercise

The trainee will complete the Conventional and Digital Print Process practical exercise.

The trainee will complete Handwriting practical exercises #29 and #30.

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Conventional and Digital Print Process competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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RUBBER STAMP EXAMINATION

Duration 1 month

Purpose To acquaint the trainee with theories and methodologies concerning the examination of rubber stamps

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the classification of rubber stamps, characteristics of rubber stamps, and the manufacturing process.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of the stamp itself or its impression on the paper
- B. Compare characteristics and/or defects
- C. Classification of the stamp

2 Training Outline

2.1 Lesson Plan

- A. Manufacturing process
- B. Classification
- C. Characteristics
- D. Ink features

2.2 Required Readings

- A. Forensic Examination of Rubber Stamps- Jan Kelly: Chapters 2, 3, 4, 5, and 7.
- B. Rubber Stamp Examination- Gary Herbertson.
- C. The Individuality of Rubber Stamps, Forensic Science International, Vol. 12, pp. 137-144, 1978.

2.3 Practical Exercise

The trainee will complete the Miscellaneous Questioned Documents Examinations practical exercise

The trainee will complete Handwriting practical exercises #31 and #32

3 Assessment

The trainer will ensure satisfactory completion of all practical exercises and competency test.

3.1 Competency Test

The trainee will complete the Miscellaneous Questioned Documents Examination competency test.



3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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CHECKWRITER EXAMINATION

Duration 1 week

Purpose To acquaint the trainee with theories and methodologies concerning the examination of checkwriters

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the classification of checkwriters, characteristics of checkwriters, and the manufacturing process.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of the checkwriter itself or its impression on the paper
- B. Compare characteristics and/or defects
- C. Classification and model differentiation of the checkwriter

2 Training Outline

2.1 Lesson Plan

- A. History
- B. Manufacturing process
- C. Classification
- D. Characteristics

2.2 Required Readings

- A. Check Protector Monograph
- B. Role of Check Protector Identification in Law Enforcement Exemplar and Comparison Problems, *Journal of Police Science and Administration*, Vol. 3, No. 3, pp. 259-266, September 1975.
- C. The Identification of Check writers, *Journal of Criminal Law, Criminology, and Police Science*, Vol. 45, No. 2, pp. 229-235, July-August 1954.

2.3 Practical Exercise

The trainee will complete the Miscellaneous Questioned Documents Examinations practical exercise.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercise and competency test.

3.1 Competency Test

The trainee will complete Miscellaneous Questioned Documents Examination competency test.



3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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SEAL EXAMINATION

Duration 1 week

Purpose To acquaint the trainee with theories and methodologies concerning the examination of seals

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the history of seals, characteristics of seals, and the manufacturing process.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of the seal itself or its impression on the paper
- B. Compare characteristics and/or defects

2 Training Outline

2.1 Lesson Plan

- A. History
- B. Manufacturing process
- C. Characteristics and/or defects

2.2 Required Readings

- A. Forensic Examination of Rubber Stamps- Jan Kelly: Chapter 1.
- B. The Examination of Notary Seals, JFS, Vol 7, No 4, pp. 899-911, Oct 1982.

2.3 Practical Exercise

The trainee will complete Miscellaneous Questioned Documents Examinations practical exercise.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercise and competency test.

3.1 Competency Test

The trainee will complete Miscellaneous Questioned Documents Examination competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



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DOCUMENT PREPARATION AND SEQUENCE DETERMINATION

Duration 1 week

Purpose To acquaint the trainee with theories and methodologies concerning the examination of document preparation and sequence determination

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the methods and techniques used to determine the order in which documents and writings have been prepared.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Perform microscopic/macroscopic examination of paper to identify class or individual features
- B. Determine if documents have been bound
- C. Determine if there is any evidence of holes or perforations
- D. Determine if there have been additions or substitutions
- E. Determine sequence of strokes and intersections

2 Training Outline

2.1 Lesson Plan

- A. Staples, folds, creases
- B. Perforations and punched holes
- C. Multi-page documents
- D. Additions and substitutions
- E. Strokes and intersections

2.2 Required Readings

- A. Examination of Sequence of Strokes with an Image Enhancement System, JFS, Vol. 33, No. 1, Jan. 1988, pp. 244-248.
- B. Establishing the Sequence of Intersecting Ball-Point Pen Strokes, Forensic Science, Vol. 11, 1978, pp. 67-74.
- C. Determining the Sequence of Ball-Point Pen Writings- A New Method?, JFS, Vol. 23, No. 1, Jan 1978, pp. 142-148.
- D. Determination of the Sequence of Writing on Both Sides of a Paper, Forensic Science, Vol. 8, 1976, pp. 165-173.
- E. Typewriting Versus Writing Instrument: A Line Intersection Problem, JFS, Vol. 34, No. 6, Nov. 1989, pp. 1329-1335.



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Questioned Documents

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2.3 Practical Exercise

The trainee will complete Miscellaneous Questioned Documents Examinations practical exercise.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercise and competency test.

3.1 Competency Test

The trainee will complete Miscellaneous Questioned Documents Examination competency test.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



Revision History

Version #	Effective Date	Brief Description of Change(s)
00	12/08/2017	Original Issue



LEGAL HISTORY OF FORENSIC DOCUMENT EXAMINATION

Duration 4 weeks

Purpose To acquaint the trainee with the legal history of forensic document examination

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge of the landmark Questioned Document cases, impact of Daubert Hearings in the discipline and testifying against graphologists.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Discuss landmark Questioned Document cases
- B. Discuss the Daubert Factors
- C. Prepare for a Daubert hearing
- D. Familiarize themselves with common graphologists
- E. Discuss how to keep graphology testimony out of court
- F. Explain Rules of Evidence and their application to forensic document examination

2 Training Outline

2.1 Lesson Plan

- A. Questioned Document cases
- B. Forensic Document Examination & Daubert
- C. Graphologists

2.2 Required Readings

- A. Forensic Testimony- Michael Bowers: Chapters 3, 4 & 5.
- B. How to Excel During Cross-Examination- Steven Babitsky & James Mangraviti: Chapter 2.
- C. Law of Disputed and Forged Documents- Baker.
- D. The Mind of the Juror- Osborn.
- E. Applying Statistics in the Courtroom- Good.
- F. Questioned Documents and the Law: Handwriting Evidence in the Federal Court System, JFS, Vol. 22, No. 4, Oct. 1977.
- G. Review of Court Decisions Concerning the Discipline of Document Examination, Jan Kelly.
- H. An Introduction to a Database of Organizations and Groups Relative to Individuals Appearing in Court as Forensic Document Examiners.
- I. Preparing for a Daubert Hearing: A Guide for Forensic Document Examiners.



J. Forensic Document Examination and Daubert Presentation, Kirsten Jackson.

2.3 Practical Exercise

The trainee will complete the Legal History of Forensic Document Examination practical exercise.

The trainee will complete Handwriting practical exercise #33.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercises.

3.1 Competency Test

Trainee will complete a competency test in the form of mock trial at the completion of the Legal Aspects and Testimony unit.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



Revision History

Version #	Effective Date	Brief Description of Change(s)
00	12/08/2017	Original Issue



PREPARATION AND TESTIMONY OF A FORENSIC DOCUMENT EXAMINER

Duration 4 weeks

Purpose To acquaint the trainee with how to prepare and testify in court as a forensic document examiner

Prerequisite None

1 Objectives

1.1 Theoretical

The trainee will gain knowledge on pre-trial conferences with attorneys, how to prepare themselves for court, prepare demonstrative exhibits for court and how to testify as an expert witness.

1.2 Practical

Following the completion of module the trainee will be able to:

- A. Discuss the testimony of forensic document examiners with attorneys
- B. Have a pre-trial conference with attorneys
- C. Prepare a demonstrative exhibit for court
- D. Discuss professional courtroom demeanor
- E. Testify as an expert witness
- F. Present clear and concise responses to questioned document testimony questions

2 Training Outline

2.1 Lesson Plan

- A. Pre-trial Conference
- B. Demonstrative Exhibits
- C. Testifying in court

2.2 Required Readings

- A. Speaking as an Expert- Stephen Mckasson & Carol Richards: Chapter 5.
- B. Forensic Testimony- Michael Bowers: Chapters 7 & 8.
- C. How to Excel During Cross-Examination- Steven Babitksy & James Mangraviti: Chapter 5.
- D. Principles of Forensic Handwriting Identification and Testimony- Smith.
- E. Questioned Documents: A Lawyer's Handbook- Levinson.
- F. The Identification of Handwriting and Cross Examination of Experts- Mehta: Chapter 6.
- G. Preparation for Trial from a Document Examiner's Viewpoint, JFS, Vol. 7, No. 3, pp. 351-356, July 1962.
- H. Pretrial Conference Between Expert and Attorney, JFS, Vol. 7, No. 4, pp.507-515, Oct. 1962.



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- I. A New Look at Qualifying Expert Witnesses and the Doctrine of Privilege for Forensic Scientists, JFS, Vol. 17, No. 4, pp. 586-591, Oct. 1972.
- J. How to cross-examine forensic scientists: A guide for lawyers, Australian Bar Review, Vol. 39, 2014.

2.3 Practical Exercise

The trainee will complete the Preparation and Testimony of a Forensic Document Examiner practical exercise.

3 Assessment

The trainer will ensure satisfactory completion of the practical exercise and competency test.

3.1 Competency Test

The trainee will complete a competency test in the form of a mock trial at the completion of the Legal Aspects and Testimony unit using Handwriting practical exercise #33.

3.2 Evaluation

The trainee and trainer will complete the checklist upon completion of the module.



Training Manual

Questioned Documents

Subject: Preparation and Testimony of a Forensic Document Examiner

LDRN: QD-TM-LEG-02

Revision History

Version #	Effective Date	Brief Description of Change(s)
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Trainee Name _____

Date _____

Overview of Forensic Document Examination	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-01: Training Program Overview			
Awareness of the Questioned Documents Training Manual Master Document List			
Awareness of the trainee responsibilities and records required for the Questioned Documents Training Notebook			
QD-TM-02: Fundamentals of Forensic Document Examination			
Microscope Practical			
Basic Terminology Practical			
QD-TM-03: Report Writing and Case Review			
Report Writing Practical			
Observed Performance			
Case Review/Verification Observation			
Supervised Performance			
Complete a mock report			
Complete technical and administrative review of a mock report and related mock case record			

Handwriting Examination	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-HW-01: Introduction to Handwriting Examination			
Introduction to Forensic Document Examination Practical			
Terminology of letters and features of handwriting Practical			
QD-TM-HW-02: Characteristics of Handwriting Identification			
HW Practical #1: Natural Variation			
HW Practical #2: Class vs. Individual Characteristics			
HW Practical #3			
QD-TM-HW-03: Genuine Handwriting			
HW Practical #4			
HW Practical #5			
HW Practical #6			
HW Practical #7			
QD-TM-HW-04: Examination of Handwriting Evidence and Handwriting Comparison			
HW Practical #8			
HW Practical #9			
HW Practical #10			



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<i>Evidence Examination and Physical Document Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-PDE-01: Paper Batch and Edge Matching			
Paper Batch and Edge Matching Practical			
HW Practical #11			
HW Practical #12			
Paper Batch and Edge Matching Competency			
QD-TM-PDE-02: Envelope Batch Matching			
Envelope Batch Matching Practical			
HW Practical #13			
HW Practical #14			
Envelope Batch Matching Competency			
QD-TM-PDE-03: Examination and Preservation of Charred and Saturated Documents			
Charred and Saturated Documents Practical			
HW Practical #15			
HW Practical #16			
Charred and Saturated Documents Competency			
QD-TM-PDE-04: Typewriting/Examination of Carbon Ribbon Evidence			
Carbon Ribbon Evidence Practical			
HW Practical #17			
HW Practical #18			
Carbon Ribbon Evidence Competency			

<i>Image Enhancement Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-IE-01: Latent Writing Impression Restoration			
Latent Writing Impression Restoration Practical			
HW Practical #19			
HW Practical #20			
Latent Writing Impression Restoration Competency			
QD-TM-IE-02: Special Instrumentation Techniques			
Special Instrumentation Techniques Practical			
HW Practical #21			
HW Practical #22			
Special Instrumentation Techniques Competency			
QD-TM-IE-03: Alterations/Obliterations/Erasures (A/O/E)			
Alterations/Obliterations/Erasures Practical			
HW Practical #23			
HW Practical #24			
Alterations/Obliterations/Erasures Competency			



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<i>Writing Instrument Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-WI-01: Inks and Writing Instruments			
Inks and Writing Instruments Practical			
HW Practical #25			
HW Practical #26			
Inks and Writing Instruments Competency			
QD-TM-WI-02: Spectral Examination of Ink (HSI)			
Hyperspectral Imaging Practical			
HW Practical #27			
HW Practical #28			
Hyperspectral Imaging Competency			

<i>Print Process Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-PP-01: Identification and Analysis of Conventional and Digital Print Processes			
Conventional and Digital Print Process Practical			
HW Practical #29			
HW Practical #30			
Conventional and Digital Print Process Competency			

<i>Miscellaneous Questioned Document Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-MISC-01: Rubber Stamp Examination			
HW Practical #31			
HW Practical #32			
QD-TM-MISC-02: Checkwriter Examination			
QD-TM-MISC-03: Seal Examination			
QD-TM-MISC-04: Document Preparation and Sequence Determination			
Miscellaneous Examinations Practical for the Unit			
Miscellaneous Questioned Documents Examination Competency for the Unit			

<i>Legal Aspects and Testimony</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-LEG-01: Legal History of Forensic Document Examination			
Legal History of Forensic Document Examination Practical			



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<i>Legal Aspects and Testimony</i>	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-LEG-02: Preparation and Testimony of a Forensic Document Examiner			
Preparation and Testimony of a Forensic Document Examiner Practical			
HW Practical #33 for the Unit			
Questioned Document Examination Competency for training program/mock trial			

	Trainee Initials	Date Completed	Trainer Initials/Date
Questioned Documents Final Written Examination			



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Trainee Name _____

Date _____

Overview of Forensic Document Examination	Trainee Initials	Date Completed	Trainer Initials/Date
QD-TM-02: Fundamentals of Forensic Document Examination			
Forensic Document Examination – Lewis			
The Scientific Examination of Questioned Documents - Kelly & Lindblom			
Foundations of Forensic Document Analysis – Allen			
The Scientific Examination of Documents – Ellen			
Suspect Documents – Harrison			
The Problem of Proof – Osborn			
Questioned Document Problems – Osborn			
Evidential Documents – Conway			
Scientific Examination of Questioned Documents – Hilton			
Education and Qualifications of Examiners of Questioned Documents, JFS, Vol. 1, No. 3, pp. 35-42, July 1956			
Ethics and the Document Examiner Under The Adversary System, JFS, Vol. 21, No. 4, pp. 779-783, October 1976			
Professionalism of Document Examiners: Problems of Certification and Training, JFS, Vol. 18, No. 4, pp. 460-468, October 1973			
The Evolution of Questioned Document Examination in the Last 50 years, JFS, Vol. 33, No. 6, pp. 1310-1318, November 1988			
Examination of a Document Case, JFS, Vol. 10, No. 4, pp. 433-440, October 1965			
History of Questioned Document Examination in the United States, JFS, Vol. 24, No. 4, pp. 890-897, 1979			
DNA Analysis and Document Examination: The Impact of Each Technique on Respective Analyses, JFS, Vol. 61, No. 1, pp. 26-34, January 2016			
Landmark Questioned Document Cases, section document			
Questioned Documents Standard Operating Procedures			



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Handwriting Examination	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-HW-01: Handwriting Examination			
The 26 Letters – Ogg			
Questioned Documents – Osborn			
Handwriting Identification: Facts and Fundamentals - Huber & Headrick			
Forensic Handwriting Identification – Morris			
Handwriting Identification and Graphology, JFS, Vol. 9, No. 4, pp. 477-484, February 1964			
The Questioned Document Expert: Skilled Specialist or Pseudoscientist, International Journal of Forensic Document Examiners, Vol. 2, No. 4, pp. 284-287, October/December 1996			
Perception and Handwriting Identification, JFS, Vol. 12, No. 1, pp.102-111, January 1967			
Forensic Examination of Peculiar Writing Systems, JFSS, Vol. 13, pp. 143-152, 1973			
Departure from Handwriting System, JFS, Vol. 17, No. 1, pp. 107-123, 1971			
QD-TM-HW-02: Characteristics of Handwriting Examination			
Investigation of Class Characteristics in English Handwriting of the Three Main Racial Groups: Chinese, Malay and Indian in Singapore, JFS, Vol. 50, No. 1, pp. 177-184, January 2005			
Frequency of Certain Characteristics in Handwriting, Pen-Printing of Two Hundred People, JFS, Vol. 8, No. 2, pp. 250-259, April 1963			
A Study of Handwritings by Twins and Other Persons of Multiple Births, JFS, Vol. 5, No. 1, pp. 121-131, January 1960			
Was This Document Written with the Left Hand?, Vol. 6, No. 3, pp. 321-330, July 1961			
Opposite-Hand Writings, JFS, Vol. 13, No. 3, pp. 376-389, July 1968			
Some Aspects of Normal Behavior: Their Use in Understanding Problems Encountered by Document Examiners, JFS, Vol. 21, No. 1, pp. 201-207, January 1976			
Drugs and Questioned Document Problems, JFS, Vol. 6, No. 1, pp. 76-87, January 1961			



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Handwriting Examination	Trainee Initials	Date Completed	Trainer Initials/Evaluation
Effects of Drugs on Handwriting, JFS, Vol. 10, No. 3, pp. 335-346, July 1965			
A Study of the Influence of Alcohol on Handwriting, JFS, Vol. 14, No. 3, pp. 309-316, July 1969			
Handwriting by the Blind, JFS, Vol. 12, No. 1, pp. 37-59, January 1967			
Influence of Age and Illness on Handwriting: Identification Problems, Forensic Science, Vol. 9, pp. 161-172, 1977			
Consideration of the Writer's Health in Identifying Signatures and Detecting Forgery, JFS, Vol. 14, No. 2, pp. 157-166, April 1969			
The Investigation of Suicide Notes, JFS, Vol. 5, No. 1, pp. 48-71, January 1960			
Characteristics of Automatic Writing During A State of Trance, Forensic Science, Vol. 3, pp. 129-134, 1974			
Handwriting and the Mentally Ill, JFS, Vol. 7, No. 1, pp. 131-139, January 1962			
QD-TM-HW-03: Genuine Handwriting			
Ames on Forgery – Ames			
Forgery Detection – Harrison			
Forgeries Over Genuine Signatures, JFS, Vol. 14, No. 4, pp. 463-468, October 1969			
Multiple Forgeries, JFS, Vol. 4, No. 2, pp. 209-214, April 1959			
Synthetic Signatures, JFS, Vol. 10, No. 1, pp. 77-85, January 1965			
Dynamic Characteristics of Signatures: Effects of Writer Style on Genuine and Simulated Signatures, JFS, Vol. 60, No. 1, pp. 89-94, January 2015			
Disguised Signatures, JFSS, Vol. 18, pp. 25-29, 1978			
The Question of Disguise in Handwriting, JFS, Vol. 23, No. 1, pp. 149-154, January 1978			
Disguised Handwriting, JFS, Vol. 15, No. 4, pp. 476-488, October 1970			
Simulation Detection in Handwritten Documents by Forensic Document Examiners, JFS, Vol. 60, No. 4, pp. 936-941, July 2015			



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<i>Handwriting Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-HW-04: Examination and Comparison of Handwriting Evidence			
The Standardization of Handwriting Opinion Terminology, JFS, Vol. 36, No. 2, pp. 311-319, March 1991			
Do Experts Frequently Disagree?, JFS, Vol. 18, No. 4, pp. 455-459, October 1973			
Inconclusive Opinions: Refuge of the Questioned Document Examiner, JFS, Vol. 35, No. 4, pp. 938-946, July 1990			
Court Ordered Handwriting Exemplars- How Effective?, JFS, Vol. 18, No. 4, pp. 448-454, October 1973			
Handwritten Entry Research, JFS, Vol. 24, No. 2, pp. 503-510, April 1979			
The Collection of Writing Standards in Criminal Investigation, Journal of Criminal Law and Criminology, Vol. 32, No. 2, pp. 241-256, 1941			
Obtaining Document Standards for Comparison, Journal of Criminal Law and Criminology, Vol. 40, No. 1, pp. 105-108, 1949			
Admissibility of Standard Writings, JFS, Vol. 10, No. 4, pp. 441-445, October 1965			
Writing Machines, Forensic Science International, Vol. 13, pp. 1-14, 1979			
An Evaluation of Line Quality in Photocopied Signatures, Journal of ASQDE, Dawson and Lindblom, 1996			

<i>Evidence Examination and Physical Document Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-PDE-01: Paper Batch and Edge Matching			
The Role of Paper in Questioned Document Work, JFSS, Vol. 13, No. 2, pp. 91-95, April 1973			
The Examination of Torn and Perforated Documents, Canadian Society Forensic Science Journal, Vol. 15, No. 3/4, pp. 116-132, August 1982			
Striation Evidence in Counterfeiting Cases, JFS, Vol. 28, No. 2, pp. 360-371, April 1983			
The Shredded Paper Puzzle: The Reconstruction of Shredded Documents, Journal of Forensic Document Examiners, Vol. 4, No. 3, pp. 273-279, July/September 1998			



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<i>Evidence Examination and Physical Document Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
The Comparison of Class Characteristics Among Several Crosscut Shredders, Journal of ASQDE, Vol. 16, No. 1, pp. 3-15, June 2013			
An "Ideal" Methodology for Manually Assembling Crosscut Shredded Documents, Journal of ASQDE, Vol. 16, No. 1, pp. 17-29, June 2013			
Edge Characteristics of Commercially Produced Paper Stock, Journal of ASQDE, Vol. 1, No. 1, pp. 57-66, June 1998			
Positive Identification of Torn Burned Matches with Emphasis on Crosscut and Torn Fiber Comparisons, JFS, Vol. 28, No. 2, pp. 351-359, April 1983			
QD-TM-PDE-02: Envelope Batch Matching			
The Envelope: Its Origin, Development and Manufacture; United States Envelope Company, pp. 1-43, 1948/1957			
The Ubiquitous Envelope, William H. Bureau, No. 0239122			
Envelope Association Through Manufacturing Characteristics, JFS, Vol. 22, No. 4, pp. 815-818			
Authentication or Refutation of Envelope Evidence, International Journal of Forensic Document Examiners, Vol. 1, No. 3, pp. 168-174			
Anonymous Communications, JFS, Vol. 4, No. 3, pp. 378-381, July 1959			
Mechanical Addressing Methods, JFS, Vol. 21, No. 2, pp. 422-426, April 1976			
The Comparison and Identification of Adhesives on Questioned Documents, JFS, Vol. 11, No. 1, pp. 28-42, January 1966			
Paper Tapes and Labels Encountered in Document Examination, JFS, Vol. 11, No. 4, pp. 496-506, October 1966			
The Examination of Commercial Printing Defects to Assess Common Origin, Batch Variation, and Error Rate, JFS, Vol. 55, No. 1, pp. 136-140, Jan. 2010			
Examination of Anonymous Letters, unpublished technical PowerPoint provided by Bonnie L. Beal and Courtney King, ASQDE 2013 <i>(to be completed after practical)</i>			
QD-TM-PDE-03: Examination and Preservation of Charred and Saturated Documents			
Charred Documents, Their Handling and Decipherment, Journal of Criminal Law and Criminology, Vol. 43, No. 6, pp. 812-826, 1953			
Decipherment of Charred Documents, Journal of Criminal Law and			



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<i>Evidence Examination and Physical Document Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
Criminology, Vol. 38, No. 5, pp. 542-546, January/February 1948			
Report on the Reconstruction of Two Time Payment Ledgers Damaged by Fire and Water, Journal of Criminal Law and Criminology, Vol. 50, No. 3, pp. 291-295, September/October 1959			
A Charred Document Case Made Easy, International Journal of Forensic Document Examiners, Vol. 2, No. 4, pp. 347-353, October/December 1996			
Writing Obscured by Bloodstains, William L. Leaver, SAFDE, October 1992			
QD-TM-PDE-04: Typewriting/Examination of Carbon Ribbon Evidence			
I.B.M. Correcting Selectric Typewriter: An Analysis of the Correctable Film Ribbon in Altering Typewritten Documents, JFS, Vol. 21, No.1, pp. 208-212, January 1976			
Typewriting Impressions: Testing and Differentiation by Chromatographic Adsorption, JFS, Vol. 3, No.4, pp. 431-433, October 1958			
Paper Fiber Impressions on Carbon Tape Ribbons, JFS, Vol. 19, No.1, pp. 136-141, January 1974			
Identification of Indented Typewritten Entries with Characters Present on a Lift-Off Correction Ribbon, JFS, Vol. 37, No. 6, pp. 1610-1620, November 1992			
Methods of Associating Typewriter Ribbons and Correcting Tapes with a Questioned Text, JFS, Vol. 34, No. 5, September 1989			
Platen Information Revealed: A Technique for Locating Latent Text on Typewriter (or Printer) Platens, JFS, Vol. 39, No. 1, pp. 223-225, January 1994			

<i>Image Enhancement Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-IE-01: Latent Writing Impression Restoration			
Indentations and Anonymous Letters, JFS, Vol. 9, No. 2, pp. 265-270, April 1964			
The Decipherment of Impressions in Paper- Some Methods Old and New, JFSS, Vol. 13, No. 83, pp. 83-90, 1973			
An Electrostatic Imaging Technique for the Detection of Indented Impressions in Documents, Forensic Science International, Vol. 13, pp. 51-54, 1979			



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Image Enhancement Examinations	Trainee Initials	Date Completed	Trainer Initials/Evaluation
Optimum Conditions for Examination of Documents Using an Electrostatic Detection Apparatus (ESDA) device to Visualize Indented Writings, JFS, Vol. 28, No. 3, pp. 697-712, 1983			
QD-TM-IE-01: Latent Writing Impression Restoration			
Application of Experimental Variables to the Use of the Electrostatic Detection Apparatus, JFS, Vol. 28, No. 4, pp. 901-910, October 1983			
How Long After Writing Can An ESDA Image Be Developed?, Forensic Science International, Vol. 39, pp. 119-125, 1988			
The Electrostatic Detection Apparatus (ESDA) and Its Effects on Latent Prints on Paper, JFS, Vol. 33, No. 2, pp. 357-377, March 1988			
The Effects of the Relative Humidity and Temperature on the Efficiency of the ESDA Process, International Journal of Forensic Document Examiners, Vol. 2, No. 3, pp. 209-213, July/September 1996			
Sequencing Writing Impressions and Laser Printing or Inkjet Printing Using the ESDA, Journal of ASQDE, Vol. 1, No. 1, pp. 40-42, 1998			
Survey of Techniques Used to Visualize Indented Markings, Journal of ASQDE, Vol. 1, No. 2, pp. 107-111, 1998			
Using the ESDA to Visualize Typewriter Indented Markings, Journal of ASQDE, Vol. 1, No. 2, pp. 113-116, 1998			
Practical Implications of Charge Transport Model for Electrostatic Detection Apparatus (ESDA), JFS, Vol. 44, No. 4, pp. 832-836, 1999			
A Method for Determining the Condition of an ESDA or IMEDD, Journal of ASQDE, Vol. 2, No. 2, pp. 97-101, 1999			
ESDA Cascade Developer Awareness, Journal of ASQDE, Vol. 2, No. 2, pp. 102-103, 1999			
Choosing Cascading Beads for the Electrostatic Detection Apparatus, Journal of ASQDE, Vol. 3, No. 2, pp. 85-90, 2000			
Secondary Impressions, Journal of ASQDE, Vol. 4, No. 1, pp. 3-11, 2001			
ESDA Effects in Light of Current Discussions, Journal of ASQDE, Vol. 7, No. 1, pp. 7-21, 2004			
Electrostatic Detection of Secret Writings, Forensic Science International, Vol. 41, pp. 17-23, 1989			
QD-TM-IE-02: Special Instrumentation Techniques			
Advances in the Forensic Analysis and Dating of Writing Ink - Brunelle and Crawford: pp. 56-71			



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<i>Image Enhancement Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
“Optical Contrasters”, A New Instrumental Aid in Deciphering Faint Writings and Other Low-Contrast Evidence, JFS, Vol. 12, No. 3, pp. 370-375, July 1967			
Use of Diapositives in Document Examination, JFS, Vol. 9, No. 4, pp. 520-527, October 1964			
Ink Differentiation with Infrared Techniques, JFS, Vol. 18, No. 4, pp. 418-433, October 1973			
The Application of Electronic Video Techniques to Infrared and Ultraviolet Examinations, JFS, Vol. 22, No. 1, pp. 53-60, January 1977			
Infrared Luminescence in the Examination of Documents, JFSS, Vol. 10, No. 3, pp. 159-164, July 1970			
Selective Wavelength Examination Applied to Ink Differentiation Problems, JFS, Vol. 9, No. 1, pp. 100-106, January 1964			
Invisible Ultraviolet Fluorescence, JFS, Vol. 10, No. 3, pp. 368-375, July 1965			
Colour in Document Examination, JFSS, Vol. 17, No. 3, pp. 3-8, January 1977			
The Examination of Color, JFS, Vol. 17, No. 2, pp. 313-317, April 1972			
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<i>Image Enhancement Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
2000, Journal of ASQDE, Vol. 2, No. 2, pp. 90-93, 1999			
Light, Color, and Filters- William J. Flynn			
Foster + Freeman VSC-6000/HS User and Application Guide			
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A Technique for the Detection of Alterations to a Document from a Carbonless Copying System, JFSS, Vol. 17, No. 9, pp. 9-12, 1977			

<i>Writing Instrument Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
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A Scientific Study of Pencil Lead Components, JFS, Vol. 23, No. 4, pp. 643-661, October 1978			
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Disappearing Inks: Its Use, Abuse and Detection, JFS, Vol. 35, No. 1, pp. 199-203, January 1990			
An Introduction to the Gel Pen, JFS, Vol. 41, No. 3, pp. 503-504, May 1996			
QD-TM-WI-02: Spectral Examination of Ink (HSI)			
Towards Automated Hyperspectral Document Image Analysis, 2013			
Quantitative Hyperspectral Imaging of Historical Documents: Technique and Applications, 2008			
Foster + Freeman VSC-6000/HS User and Application Guide			

Print Process Examination	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-PP-01: Identification and Analysis of Conventional and Digital Print Processes			
Handbook of Print Media - Helmut Kipphan: Chapters 1, 2, 3 (pages 493-499) & 5			
Pocket Pal "The Handy Book of Graphic Arts Production": Pages 8-34, 120-172			
The Office Copying Revolution - Ian Batterham: Chapters 1, 2, 6, 9, 10 & 11			
Printing Processes Manual: New Zealand Police- Walsh, D. and James, T.			
Printed Matter as Questioned Documents, JFS, Vol. 12, No. 1, pp. 82-101, January 1967			
Identifying the Copying Machine Used in Preparation of Simulated Forgeries, JFS, Vol. 18, No. 4, pp. 410-413, 1973			
Detecting Fraudulent Photocopies, Forensic Science International, Vol. 13, pp. 117-123, 1979			
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<i>Print Process Examination</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
Automatic Counterfeit Protection System Code Classification- Beusekom, Schreyer, and Breuel			
<i>Miscellaneous Questioned Document Examinations</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-MISC-01: Rubber Stamp Examination			
Forensic Examination of Rubber Stamps - Jan Kelly: Chapters 2, 3, 4, 5, and 7			
Rubber Stamp Examination - Gary Herbertson			
The Individuality of Rubber Stamps, Forensic Science International, Vol. 12, pp. 137-144, 1978			
QD-TM-MISC-02: Checkwriter Examination			
Check Protector Monograph			
Role of Check Protector Identification in Law Enforcement Exemplar and Comparison Problems, Journal of Police Science and Administration, Vol. 3, No. 3, pp. 259-266, September 1975			
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QD-TM-MISC-03: Seal Examination			
Forensic Examination of Rubber Stamps - Jan Kelly: Chapter 1			
The Examination of Notary Seals, JFS, Vol 7, No 4, pp. 899-911, October 1982			
QD-TM-MISC-04: Document Preparation and Sequence Determination			
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Determining the Sequence of Ball-Point Pen Writings- A New Method?, JFS, Vol. 23, No. 1, pp. 142-148, January 1978			
Determination of the Sequence of Writing on Both Sides of a Paper, Forensic Science International, Vol. 8, pp. 165-173, 1976			
Typewriting Versus Writing Instrument: A Line Intersection Problem, JFS, Vol. 34, No. 6, pp. 1329-1335, November 1989			
<i>Legal Aspects and Testimony</i>	Trainee Initials	Date Completed	Trainer Initials/Evaluation
QD-TM-LEG-01: Legal History of Forensic Document Examination			



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Legal Aspects and Testimony	Trainee Initials	Date Completed	Trainer Initials/Evaluation
Forensic Testimony - Michael Bowers: Chapters 3, 4 & 5			
How to Excel During Cross-Examination- Steven Babitsky & James Mangraviti: Chapter 2			
Law of Disputed and Forged Documents - Baker			
The Mind of the Juror – Osborn			
Applying Statistics in the Courtroom – Good			
Questioned Documents and the Law: Handwriting Evidence in the Federal Court System, JFS, Vol. 22, No. 4, October 1977			
Review of Court Decisions Concerning the Discipline of Document Examination, Jan Kelly			
An Introduction to a Database of Organizations and Groups Relative to Individuals Appearing in Court as Forensic Document Examiners			
Preparing for a Daubert Hearing: A Guide for Forensic Document Examiners			
Forensic Document Examination and Daubert Presentation, Kirsten Jackson			
QD-TM-LEG-02: Preparation and Testimony of a Forensic Document Examiner			
Speaking as an Expert - Stephen Mckasson & Carol Richards: Chapter 5			
Forensic Testimony - Michael Bowers: Chapters 7 & 8			
How to Excel During Cross-Examination - Steven Babitsky & James Mangraviti: Chapter 5			
Principles of Forensic Handwriting Identification and Testimony – Smith			
Questioned Documents: A Lawyer’s Handbook – Levinson			
The Identification of Handwriting and Cross Examination of Experts - Mehta: Chapter 6			
Preparation for Trial from a Document Examiner’s Viewpoint, JFS, Vol. 7, No. 3, pp. 351-356, July 1962			
Pretrial Conference Between Expert and Attorney, JFS, Vol. 7, No. 4, pp.507-515, October 1962			
A New Look at Qualifying Expert Witnesses and the Doctrine of			



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How to cross-examine forensic scientists: A guide for lawyers, Australian Bar Review, Vol. 39, 2014			