



Standard Guide for Minimum Training Requirements for Forensic Document Examiners¹

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1. Scope

1.1 This guide provides minimum requirements and procedures that should be used for the fundamental training of forensic document examiners (Guide E444).

1.2 This guide may not cover all aspects of training for the topics addressed or for unusual or uncommon examinations.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

E444 Guide for Scope of Work of Forensic Document Examiners

E1732 Terminology Relating to Forensic Science

E2195 Terminology Relating to the Examination of Questioned Documents

3. Terminology

3.1 For definitions of terms in this guide, refer to Terminologies E1732 and E2195.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *technical visit, n*—travel for the purpose of obtaining information, knowledge, or training, including interaction with or demonstration by pertinent manufacturers, businesses, and laboratories.

4. Significance and Use

4.1 The procedures outlined here are grounded in the generally accepted body of knowledge and experience in the field of forensic document examination. By following these

requirements and procedures, an appropriate trainee (see 5.2) can acquire the scientific, technical, and other specialized knowledge, skill, and experience required to reliably perform the work of a forensic document examiner (Guide E444).

5. Equipment and Personnel

5.1 *Training Materials and Equipment:*

5.1.1 Access to texts, periodicals, papers, and other professional literature.

5.1.2 Access to equipment appropriate to each area of instruction.

5.2 *Requirements for the Trainee Candidate:*

5.2.1 An earned baccalaureate degree or equivalent from an accredited college or university.

5.2.2 Documented successful completion of a form discrimination test.

5.2.3 Documented successful completion of a color perception test.

5.2.4 Documented successful completion of near and distant visual acuity tests with best corrected vision within six months prior to commencement of training.

5.3 *Requirements for the Trainer(s):*

5.3.1 Requirements for the principal trainer:

5.3.1.1 The principal trainer shall be a forensic document examiner;

5.3.1.2 Have successfully completed the equivalent of a minimum of 24 months full-time supervised training;

5.3.1.3 Have been trained in the topics of instruction in this guide (Section 7); and

5.3.1.4 Have at least five years of full-time post-training experience as a forensic document examiner.

5.3.1.5 All of the above should be documented.

5.3.1.6 The principal trainer should have successfully completed a course or seminar in instructor development.

5.3.2 The qualifications of any other trainers shall be approved by the principal trainer.

6. Procedure

6.1 The training program shall be the equivalent of a minimum of 24 months full-time training under the supervision of a principal trainer.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

6.1.1 The training program shall be successfully completed in a period not to exceed four years.

6.1.2 Each area of instruction will have an objective(s) established by the principal trainer. Examination(s) (for example, written test, oral test, practical exercise) will be administered in order to measure the trainee's knowledge.

NOTE 1—Although attending meetings and presentations is useful as supplemental training, it does not replace the training outlined in Section 7 of this guide. However, the principal trainer may grant credit to the trainee for knowledge (as in accordance with Section 7) acquired at such meetings and presentations.

6.1.3 The principal trainer may grant credit for prior training or experience in Section 7 subject areas when the trainee can demonstrate and document such training or experience.

6.1.4 A training record for each trainee will be maintained and will document the following:

6.1.4.1 Instruction in each topic area.

6.1.4.2 A bibliography of relevant literature studied.

6.1.4.3 Examination(s) (for example, written test, oral test, practical exercise).

6.1.4.4 Case statistics (for example, number, type, items, reports).

6.1.4.5 Outside training, technical visits, courses, conferences, or workshops attended.

6.1.4.6 Research conducted.

7. Syllabus

7.1 A formal written training program will include specific topics of instruction. The order in which they are administered is discretionary; however, the amount of time must be adequate to ensure competency in all topic areas. The minimum specific topics are:

7.2 *Introduction and History of Forensic Document Examination:*

7.2.1 Ethical responsibilities.

7.2.2 Literature of the field.

7.2.3 Evolution of the field.

7.2.4 Historical cases.

7.2.5 Scientific method.

7.2.6 Research methodology.

7.3 *Evidence Handling Procedures:*

7.3.1 Procedures and protocols.

7.3.2 Relationship of forensic document examination to other forensic disciplines.

7.3.3 Collection and preservation.

7.3.4 Marking and documentation.

7.3.5 Chain of custody.

7.4 *Examination Procedures:*

7.4.1 Procedures and protocols.

7.4.2 Theory of individualization.

7.4.3 Case organization.

7.4.4 Note taking.

7.4.5 Conclusions and findings.

7.4.6 Report writing.

7.5 *Laboratory Instrumentation and Equipment:*

7.5.1 Procedures and protocols.

7.5.2 Physics of light pertinent to forensic document examination procedures.

7.5.3 Microscopy.

7.5.4 Measuring systems and devices.

7.5.5 Light sources.

7.5.6 Electrostatic detection devices.

7.5.7 Typewriter examination devices.

7.5.8 Computers and peripherals.

7.5.9 Other relevant laboratory equipment.

7.6 *Paper:*

7.6.1 Procedures and protocols.

7.6.2 History of paper.

7.6.3 Manufacturing processes.

7.6.4 Physical properties (for example, light-reactive, watermarks, dimensions, security features).

7.6.5 Physical matches (for example, fibers, tears, edge striations).

7.6.6 Tapes and adhesives.

7.6.7 Indentations.

7.7 *Writing Instruments and Inks:*

7.7.1 Procedures and protocols.

7.7.2 History of writing instruments and inks.

7.7.3 Properties of inks.

7.7.4 Destructive and nondestructive analyses of inks.

7.7.5 Writing instrument characteristics.

7.7.6 Sequence, direction, and pressure of strokes.

7.8 *Handwriting (including Cursive or Script Style Writing, Hand Printing, Signatures, Numerals, and Other Written Marks or Signs):*

7.8.1 Procedures and protocols.

7.8.2 History and theory.

7.8.3 Physiology of handwriting and motor control.

7.8.4 Handwriting systems.

7.8.5 Handwriting comparison process.

7.8.6 Individualizing characteristics (individual and class).

7.8.7 Features of handwriting (for example, variation, line quality, skill level).

7.8.8 Distorted handwriting.

7.8.9 Factors affecting handwriting (internal and external).

7.8.10 Tracings and simulations.

7.8.11 Other handwriting problems.

7.9 *Alterations, Obliterations, and Erasures:*

7.9.1 Procedures and Protocols.

7.9.2 Types of alterations (for example, page substitution, insertion).

7.9.3 Types of obliterations (for example, opaquing fluid, over-writing, chemical).

7.9.4 Types of erasures (physical and chemical).

7.9.5 Detection and decipherment techniques.

7.10 *Typewriters:*

7.10.1 Procedures and protocols.

7.10.2 History of typewriters.

7.10.3 Fundamentals of typewriter examination (individualization and comparison).

7.10.4 Typestyle classification.

7.10.5 Typing and correction ribbon examinations.

7.10.6 Paper fiber transfer.

7.11 *Computer Printers:*

7.11.1 Procedures and protocols.

7.11.2 History of computer printers.

7.11.3 Fundamentals of computer printer examinations (individualization and comparison).

7.11.4 Computer printing processes (impact and nonimpact).

7.11.5 Font classification.

7.12 *Photocopiers:*

7.12.1 Procedures and protocols.

7.12.2 History of photocopiers.

7.12.3 Electrostatic and other imaging processes.

7.12.4 Fundamentals of examination (individualization and comparison).

7.12.5 Alteration and manipulation techniques.

7.13 *Facsimiles:*

7.13.1 Procedures and protocols.

7.13.2 History of facsimile machines.

7.13.3 Imaging processes.

7.13.4 Fundamentals of examination (individualization and comparison).

7.13.5 Alteration and manipulation techniques.

7.14 *Printing Processes:*

7.14.1 Procedures and protocols.

7.14.2 History of printing.

7.14.3 Typography.

7.14.4 Characteristics of printing processes.

7.14.5 Fundamentals of examination (individualization and comparison).

7.14.6 Security features.

7.15 *Mechanical Impressions:*

7.15.1 Procedures and protocols.

7.15.2 History of devices (for example, check writers, rubber and polymer stamps, paper binders, staples, embossing devices, seals and stamped impressions, fasteners, hole punches).

7.15.3 Fundamentals of examination (individualization and comparison).

7.16 *Charred and Soaked Documents:*

7.16.1 Procedures and protocols.

7.16.2 Care and preservation.

7.16.3 Examination and decipherment.

7.17 *Photography and Digital Imaging:*

7.17.1 Procedures and protocols.

7.17.2 General photography.

7.17.3 Document photography.

7.17.4 Digital photography.

7.17.5 Digital imaging techniques.

7.17.6 Alteration and manipulation techniques.

7.17.7 Image editing software.

7.18 *Miscellaneous Examinations:*

7.18.1 Dependent upon the capabilities or requirements of the laboratory.

7.19 *Expert Witness and Legal Proceedings:*

7.19.1 Procedures and protocols.

7.19.2 Terminology.

7.19.3 Relevant law.

7.19.4 Adjudication systems.

7.19.5 Effective communication.

7.19.6 Courtroom demeanor.

7.19.7 Preparation and use of demonstrative exhibits.

7.19.8 Observation of pre-trial conferences and testimony of experts, actual or mock.

7.19.9 Participation as an expert witness in mock trials.

7.19.10 Understanding of critical challenges to the discipline.

7.20 *Practical Experience:*

7.20.1 Supervised casework.

7.20.2 Training or observation at other forensic document laboratories is recommended.

7.20.3 Supplemental education (for example, courses, seminars, technical visits, workshops).

8. Keywords

8.1 forensic document examination; forensic document examiner; forensic sciences; questioned documents; training

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