

UNIVERSITY OF THE CORDILLERAS  
College of Criminal Justice Education

CRIM 5 (Questioned Document Examination)

<b>Course:</b>	CRIMIN 5
<b>Course Title:</b>	QUESTIONED DOCUMENT EXAMINATION
<b>Course Credits:</b>	3 units
<b>Contact Hours/Weeks:</b>	5 hours
<b>Prerequisite:</b>	CDI1
<b>Course Description:</b>	

The course covers the scientific methods of identification and examination of questionable documents, handwriting examination, detection of forgery, falsification and counterfeiting of documents which stress the procedures of restoring and deciphering erasures and obliterations; examination of documents by means of visible light, ultra-violet light and ultra-red radiation and colored powders; recognition and selection of standards; and examination of questionable typewriting, computerized documents and other forms of modern printing.

**Course Outcomes:** At the end of the trimester, the students are expected to have:

1. in-depth knowledge and understanding of the
  - a. application of Questioned Document Examination in the service of justice
  - b. important terminologies in questioned document examination
  - c. legal definitions and implications of documents as evidence
  - d. historical development of handwriting, forgery, writing instrument and writing materials
  - e. different fields in Questioned Document Examination
  
2. applied in practical exercises with competency in the
  - a. collection of requested standards
  - b. examination of questioned document examination
  - c. identification of forged and genuine signatures and handwriting
  - d. identification of counterfeited paper bills and genuine paper bills
  - e. proper presentation in court as expert witness involving QDE cases

**Topic 1:**

## Introduction to Questioned Document Examination

### Objectives:

- A. Remember and understand the words and phrases used in questioned document examination.

### Instructional Materials:

Video Discussion

### Teaching-Learning Activity/Lesson Proper

#### **DEFINITION OF TERMS**

- A. **DOCUMENTS** - any material containing marks, symbols, or signs either visible, partially visible that may present or ultimately convey a meaning to someone, maybe in the form of pencil, ink writing, typewriting, or printing on paper.

#### **KINDS OF DOCUMENTS**

1. Public Document - a document created, executed or issued by a public official in response to the exigencies of the public service, or in the execution of which a public official intervened.
  2. Official Document – a document which is issued by a public official in the exercise of the functions of his office.
  3. Private Document – every deed or instrument executed by a private person without the intervention of a notary public or any person legally authorized, by which the documents some disposition or agreement is provide evidenced or set forth.
  4. Commercial Document – Any instrument defined and regulated by the Code of Commerce or other commercial law.
  5. Electronic Document – exist only in electronic form such as date stored on a computer network, back-up, archive, or other storage media.
  6. Paper-based – produced traditionally and manually
- B. QUESTIONED DOCUMENT** – Document is usually questioned because its origin, its contents, or the circumstances and story regarding its production, arouse serious suspicions as to its genuineness, or it may be adversely scrutinized simply because it displeases someone.
- C. QUESTIONED DOCUMENT EXAMINATION/FORENSIC DOCUMENT EXAMINATION** - The practice of application of document examination to the purposes of the law.
- D. FORENSIC DOCUMENT EXAMINER/QUESTIONED DOCUMENT EXAMINER** – refers to persons who study all aspects of a document to determine its authenticity, origin, handwriting, photocopies, inks and papers.

- E. HOLOGRAPHIC DOCUMENT** – any document completely written and signed by one person.
- F. REFERENCE COLLECTION** – Material compiled and organized by the document examiner to assist him in answering special questions.
- G. RELATED FIELD OF STUDY**
1. Historical dating - It involves the verification of age and worth of document or object.
  2. Fraud Investigation - It focuses on the money trail and criminal intent
  3. Paper and ink Specialists - These are public or private experts who date, type, source, and/or catalogue various types of paper, watermarks, ink, printing/copy/fax machines, computer cartridges, etc., using chemical methods.
  4. Forgery Specialists - These are public or private experts who analyze, altered, obliterated, changed, or doctored documents and photos using infrared lighting and other equipment.
  5. Handwriting Analysis - These are psychology experts who assess personality traits from handwriting samples, also called as graphologist or graphoanalysts.
  6. Forensic stylistics - Refers to the same purpose but by looking at semantics, spelling, word choice, syntax and phraseology.
  7. Typewriting Analysis - These are experts on the origin, make and model used in typewritten document.
  8. Computer Crime Investigation
  9. Imprint Examination – including those produced by manual devices, mechanical devices and electronic printing devices; also includes those produced by the manufacture of counterfeiters.

**References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.*
- SWGDOC Terminology Relating to the Examination of Questioned Documents

**Topic 2:**

Handwriting Identification and Examination

**Objectives:**

- A. Understand the physiological basis of handwriting and other concepts in handwriting process
- B. Explain the importance of signature and identify the different types of signature

**Instructional Materials:**

Video Discussion- ppt

**Teaching-Learning Activity/Lesson Proper**

**HANDWRITING**

- It is the result of a very complicated series of acts, being used a whole, and combination of certain forms of visible mental and muscular habits acquired by long, continued painstaking effort.

**COPYBOOK FORM**

- It is the instruction taught in school.

**IMPORTANCE OF COPYBOOK FORM**

1. The nationality of the writer
2. The system learned
3. The date when the writing was acquired
4. To some of the influences that have surrounded the writer

**PHYSIOLOGICAL BASIS OF HANDWRITING**



**DEVELOPMENT OF HANDWRITING**

1. Drawing Stage
2. Adolescence Stage/Manner of Execution
3. Stage of Subject Matter
4. Stage of Degeneration

**STYLES OF HANDWRITING**

1. Printed
2. Cursive
3. Print-writing

## **SIGNATURE**

- A mark or sign made by an individual on an instrument or document to signify knowledge, approval, acceptance, or obligation.

## **TYPES OF SIGNATURE**

1. Handwritten Signature
2. Electronic Signature
3. Autopen Signature
4. Stamp Signature
5. Guided Signature
6. Model Signature

## **IMPORTANCE OF SIGNATURE**

1. Evidence
2. Ceremony
3. Approval
4. Efficiency and Logistics

## **Enhancement Activity/Outcome:**

1. Describe the changes and style of your handwriting at the different stages of development of handwriting. Enumerate the characteristics which were removed or added over the span of development. Provide at least five observations.

Stages	Omitted	Added
1.		
2.		
3.		
4.		

## **References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by*

Albert S. Osborn, ... *With an Introduction by Professor John H. Wigmore, ..* N.Y., 1910.

- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

### **Topic 3:**

Basis of handwriting and signature analysis

### **Objectives:**

- A.** Understand the guiding principles in handwriting analysis
- B.** Identify the different conditions which create changes in the handwriting of a person.

### **Instructional Materials:**

Video Discussion- ppt

### **Teaching-Learning Activity/Lesson Proper**

#### **PRINCIPLES OF HANDWRITING ANALYSIS**

1. No two writers write exactly alike
2. The physical writing condition and position of the person including his writing instrument may affect the handwriting characteristics but they do not confine all its identifying elements.
3. A writer cannot exceed his maximum writing ability or skill without serious effort and training applied over a period of time.
4. The combination of handwriting characteristics including those derived from form and writing movements are essential elements of identification.
5. Individuality in handwriting can only be determined through comparative examination with the standard written or prepared under comparable condition
6. Similarity does not mean identity
7. Complete identity means definite forgery
8. A writing was written by one person when there is a sufficient number of identical writing habits and identical primary controlling characteristics and addition, the absence of divergent characteristics.
9. A writing was not written by one person when there is a sufficient number of divergent writing characteristics and the absence of identical primary controlling characteristics.

### **Enhancement Activity/Outcome:**

1. The different principles applied in Questioned Document Examination justify its credibility as one of the effective methods of personal identification. Choose one principle and explain its concept in 3-4 sentences.

**References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown*, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

**Topic 4:**

**Terminologies related to handwriting identification and examination**

**Objectives:**

- A. Identify the different elements of handwriting and stroke
- B. Understand the terminologies relevant in handwriting analysis and examination
- C. Illustrate and describe the different characteristics in handwriting and stroke structures.

**Instructional Materials:**

Terminologies - ppt

**Teaching-Learning Activity/Lesson Proper**

1. Alignment – The relation of the parts of the whole of writing or line of individual letters in words to the baseline.
2. Angular form – sharp, straight strokes that are made by stopping the one and changing direction before continuing.
3. Arcade forms – forms that look like arches; rounded on top and open at the bottom.
4. Bow - the part of the letter or character of signature or handwriting which formed like a bow of an arrow or simply a curved stroke aligned in a vertical direction.
5. Collation – side by side comparison
6. Comparison – The act of setting two or more items side by side to weigh their identifying qualities
7. Dextral

8. Disguised writing – A writer may deliberately try to alter his usual writing habits of hiding his identity.
9. Down strokes – the movement of the pen toward the writer
10. Form – the writer's chosen writing style.
11. Garland forms – A cup-like connected form that is open at the top and rounded on the bottom.
12. Gestalt – "complete", "whole"
13. Graphoanalysis – the study of handwriting based on the two fundamental strokes, the curve and the straight strokes.
14. Graphometry – analysis and comparison and measurement
15. Graphology – the art of determining character disposition and amplitude of a person from the study of handwriting.
16. Hand lettering – any disconnected style of writing in which each letter is written separately.
17. Left handed writing
18. Letter Space – the amount of space left between letters.
19. Line Direction – it is the movement of the baseline.
20. Line Quality – the overall character of the ink lines from the beginning to the ending strokes.
21. Line Space – the amount of space left between lines.
22. Manuscript writing – a disconnected form of script or semi-script writing.
23. Margins – the amount of space left around the writing on all four sides.
24. Movement

### **MOVEMENTS IN HANDWRITING**

- Finger Movement – The thumb, the first, the second and slightly the third finger are in actual motion.
  - Hand Movement – Produced by the movement or action of the whole hand with the wrist as the center of attraction.
  - Forearm Movement – the movement of the shoulder, hand and arm with the support of the table.
  - Whole-arm Movement – action of the entire arm without resting.
25. Natural Writing – any specimen of writing executed normally without any attempt to control or alter its identifying habits and its usual quality and execution.
  26. Natural Variation – these are normal or usual deviations found between repeated specimens of any individual handwriting.
  27. Pen emphasis – the act of intermittently forcing the pen against the paper surfaces.
  28. Pen Hold – the place where the writer grasps the barrel of the pen and the angle at which he holds it.
  29. Pen position – relationship between the pen point and the paper. The orientation of the writing instrument.
  30. Pen pressure – the average force with which the pen contacts the paper.
  31. Print Script – A creative combination of printing and cursive writing



32. Proportion and Ratio - the relation between the tall and the short letter
33. Quality – the distinct and peculiar characters. Also, quality is used in describing handwriting to refer to any identifying factor that is related to the writing movement itself.
34. Rhythm – the element of writing movement, which is marked by regular or periodic recurrences. It may be classed as smooth, intermittent, or jerky in its quality; the flourishing succession of motion which are recorded in a written record.
35. Shading – is the widening of the ink strokes due to the added pressure on a flexible pen point or to the use of a stub pen.
36. Significant Writing Habit – any characteristic of handwriting that is sufficiently uncommon and well-fixed to serve as a fundamental point in the identification.
37. Simplification – eliminating extra or superfluous strokes from the copybook form.
38. Size -
39. Skill – relative degrees or ability or skill and a specimen of handwriting usually contains evidence of the writer's proficiency; degree, ability, or skill of a write proficiency.
40. Slope/Slant – the angle or inclination of the axis of the letters relative to the baseline.
41. Speed of writing – the personal pace at which the writer's pen moves across the paper.
42. Thread form – an indefinite connective form that looks flat and wavy
43. Variation – the act or process of changing
44. Word Space – the amount of space between words.
45. Writing Conditions – circumstances which the writing was prepared and factors influencing the writer's ability to write at the time of execution.
46. Writing Habits – any repeated element in one's handwriting.
47. Writing impulse – the result of the pen touching down on the paper and moving across the page, until it is raised from the paper.
48. Wrong-Handed Writing – any writing executed with the opposite hand that normally used; a.k.a as "with the awkward hand".
49. Reprographic examination – refers to examination of documents which include photocopies, facsimile, photographs and the like.
50. Rubric or embellishment – refers to the additional unnecessary strokes to legibly of letter forms or writings but incorporated in writing for decorative or ornamental purposes.

### **TERMINOLOGIES CONCERNING STROKE CHARACTERISTICS**

1. ARC - a curved formed inside the top curve of loop/as in small letter "h", "m", "n", "p".
2. ARCH – any arcade form in the body of a letter found in small letters which contain arches.
3. ASCENDER – is the top portion of a letter or upper loop.
4. APEX – the uppermost point of a character.

5. BASELINE – maybe actually on a ruled paper, it might be imaginary alignment of writing. It is ruled or imaginary line upon which the writing rests.
6. BEADED – preliminary embellished initial stroke which usually occurs in capital letters.
7. BEARD – is the rudimentary initial up stroke of a letter.
8. BLUNT – the beginning and ending stroke of a letter (without hesitation).
9. BOWL – a fully rounded oval or circular form on a letter complete into “o”.
10. BUCKLE/BUCKLENOT – a loop made as a flourish which is added to the letters, as a small letter “k and a” or in capital letter “A”, “K”, “I”.
11. CACOGRAPHY – a bad writing
12. CALLIGRAPHY – the art of beautiful writing
13. CONNECTING STROKE – a line joining two adjacent characters
14. CROSS STROKE – a stroke that crosses another portion of the character and is attached at either end.
15. CROSSBAR – a stroke that intersects other portions of the character at both ends.
16. DESCENDER – opposite of ascender, the lower portion of a letter.
17. DIACRITIC – “+” crossing and dots of the letter “i” and “j”. The matters of the Indian script are also known as diacritic signs.
18. DRAG STROKE – a stroke resulting from incomplete lifting of the pen.
19. ENDING/TERMINATE STROKE OF TOE – the end of a letter.
20. EYE/EYELET/EYELOOP – a small loop or curve formed inside the letters.
21. FOOT – the lower part which rest on the base line.
22. HABITS – any repeated elements or details, which may serve to individuals writing.
23. HESITATION – the irregular thickening of ink which is found when writing slows down or stop while the pen take a stock of at the position.
24. HIATUS/PEN JUMP – A gap occurring between a continuous strokes without lifting the pen. Such as occurrence usually occurs due to speed. It may be regarded also as special form of pen lift.
25. HOOK – it is a minute curve or an ankle which often occurs at the end of the terminal strokes/it is also sometimes occur at the beginning of an initial strokes.
26. HUMP – the rounded outside of the top of the bend stroke or curve in small letter.
27. INDENTATION – latent or visible impressions in paper or other media.
28. KNOB – the extra deposit of ink in the initial and terminal stroke due to the slow withdrawal of the pen from the paper (usually applicable to fountain pen).
29. LIGATURE/CONNECTION – the stroke which connects two stroke of letter.
30. LONG LETTER – those letters with both upper and lower loops.
31. OVAL – the portion of the letter which is oval in shape.
32. PATCHING – retouching or going back over a defective portion of a written stroke. Careful is common defect on forgeries.
33. PEN LIFT – an interruption in a stroke caused by removing the writing instrument from the paper.
34. RETRACE/RETRACING – any part of a stroke which is super imposed upon the original stroke. Example; vertical strokes of the letters “d”, “t” while coming downward from the top to bottom will have a retracing strokes.
35. SHOULDER – outside portion of the top curve seen in small letters.

36. SPUR – a short initial or terminal stroke.
37. STAFF – any major long downward stroke of a letter that is long stroke of the letter.
38. STEM OR SHANK – the upright long downward stroke that is the trunk or stalk, normally seen in capital letters.
39. TICK/HITCH – any short stroke, which usually occurs at the top of the letters.
40. TREMOR – a writing weakness portrayed irregular shaky strokes is described as writing tremor.
41. Tremor of Fraud – The characteristics of tremor of fraud are inequality in movement at any place in any stroke or line, with strokes too strong and vigorous combined with weak, hesitating strokes, interruptions in movement in movement, unequal distribution of ink on upward or varying pen pressure.
42. Tremor of age, or of extreme weakness
43. WHIRL – the long upward stroke of the ascender.
44. BULBS – a small circular enclosure.
45. FEATHERING – spreading of ink in the paper.
46. GRADUATED OR EXPLOSIVE SHADING – when the shading in a letter gradually increases or decreases, it is called shading. If it is irregular, it is called “explosive” shading.

**Enhancement Activity/Outcome:**

1. Following the format below, illustrate the different elements and characteristics of handwriting. Label the specific part which describes the terminologies.

Alignment	Form	Simplification
Angular	Line Space	Shading
Arcade	Line Direction	Slope/Slant
Garland	Rubric or embellishment	Thread form
Ascender	Beaded	Hook
Descender	Beard	Long letter
Linear	Buckleknot	Staff

Supralinear	Crossbar	Shank

### References:

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.*
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

### Topic 5:

Characteristics of Handwriting

### Objectives:

- A. Differentiate the various characteristics appearing in our handwriting
- B. Understand the importance of individual characteristics in handwriting analysis

### Instructional Materials:

Video Discussion- ppt

### Teaching-Learning Activity/Lesson Proper

#### **TYPES OF CHARACTERISTICS**

1. General Characteristics – these characteristics refer to those habits which are part of basic writing system.
2. National Characteristics – these refer to the extent that writing system within a country share common features and induce class characteristics in the writing of its people, different from other countries.
3. Accidental Characteristics – these are isolated, brief or temporary digression from normal writing practices observed in writing standards.
4. Individual Characteristics – these are characteristics which are the result of the writer's muscular control, coordination, age, health, nervous, temperament, frequency, personality and character.
  - Permanent
  - Common or usual

- Occasional
- Rare

### **POINTS IN IDENTIFICATION**

1. Writing movement
2. Form and design of letters
3. Muscular control and motor control
  - Loose Writing
  - Restrained Writing
4. Motor coordination
5. Shading
6. Alignment
7. Pen Pressure
8. Connection
9. Pen Hold
10. Skill
11. Rhythm
12. Disconnections or pen lifts between letters
13. Speed
14. Slant as a writing habits
15. Proportion of letters as an individual characteristics or habit
16. Quality of strokes/Line quality
17. Variation

### **Enhancement Activity/Outcome:**

1. How do class characteristics interfere during the examination of questioned documents and standards? Answer it in 3-4 sentences only.
2. How do variations interfere during the examination of questioned documents and standards? Answer it in 3-4 sentences only.

### **References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.*
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

### **Topic 6:**

Falsification, Counterfeiting and Forgery

**Objectives:**

- A. Understand the legality of forgery and falsification in the Philippine laws
- B. Identify the different process in forgery and indicators of genuine and forged signature

**Instructional Materials:**

Video Discussion

**Teaching-Learning Activity/Lesson Proper****DEFINITION OF TERMS****1. FALSEMAKING**

- a. The creation of fraudulent writing on a document or the alteration of an existing document.

**2. FALSIFICATION**

- a. In Q.D. context, it pertains to the act of adding and substituting, erasing and obliterating an original entry, be it punctuation marks, signs, symbols, numerals, characters and or letters in a document

**3. COUNTERFEITING**

- a. The crime of making, circulating, uttering false coins and bank notes

**4. FORGERY**

- a. The act of falsely making and materially altering, with intent to defraud, any writing which if genuine, might be legal efficacy or the foundation of a legal liability.

**TYPES AND METHODS OF FORGERY**

1. Simple Forgery
2. Simulated Forgery
3. Traced Forgery
4. Optical Forgery
5. Auto Forgery

**INDICATORS OF FORGERY**

1. Tremors
2. No rhythm
3. Carefulness or unusual care
4. No contrast between thin and thick stroke
5. Slow writing
6. Blunt ending and beginning
7. Absence of spontaneity
8. Restrained writing
9. No variation

### **INDICATIONS OF SIMULATED AND TRACED FORGERIES**

1. Tremulous and broken connecting strokes between letters, indicating points at which the writer has temporarily struck
2. No rhythm
3. Carefulness or unusual care and deliberation
4. No contrast between upward and downward strokes
5. Slow writing – angular writing
6. Blunt beginning and endings
7. Placement of diacritical marks just over the stem of the letters
8. Absence of spontaneity – lack of smoothness of letters
9. Restrained writing
10. No variation

### **INDICATIONS OF GENUINE WRITING**

1. Carelessness
2. Spontaneity
3. Alternation of thin and thick strokes
4. Speed
5. Simplification
6. Upright letters are interspersed with slanting letters
7. Upward strokes to a threadlike tracing
8. Rhythm
9. Good line quality
10. Variation

### **Enhancement Activity/Outcome:**

1. You learned from the suspect that he forged the signature using traced forgery. What is the best evidence needed to be collected to prove that there is forgery? What is the easiest and best way to prove that the signature was traced before the conduct of scientific examination?

### **References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.*
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

## Topic 7:

Collection of standards

### Objectives:

- A. Apply the different proper procedures in collecting requested and collected standards
- B. Identify the types of handwriting standards and their advantages and disadvantages
- C. Understand the basic points that should be considered in obtaining standards

### Instructional Materials:

Video Discussion

### Teaching-Learning Activity/Lesson Proper

\*In order to arrive in a reliable conclusion, the examiner needs genuine documents for comparison to the questioned document. The known materials needed for comparison purposes are known as STANDARDS.

#### **STANDARDS**

1. Are condensed and compact-set of authentic specimen which is adequate and proper, should contain a cross section of the material from its source.
2. Collected and Requested Standards

#### **FACTORS TO BE CONSIDERED IN THE SELECTION OF STANDARDS**

1. Amount of standards
2. Similarity of subject matter
3. Relatives of the QD and SD

#### **WHAT ARE THE DO'S AND DON'TS IN COLLECTING EXEMPLARS**

1. Don't rely on too little writing.
  - 20-25 signatures
  - 4-5 pages of handwriting
2. Don't rely exclusively on writing that differs significantly from the questioned one.
3. Do collect similar samples
4. Don't rely on documents recently written if the comparison documents were written many years ago.
5. Do collect standards dated at approximately the same time as the questioned document.
6. Don't compare writing written under abnormal conditions with normal writing.
7. Do collect documents that duplicate the writing environment.
8. Do instruct the writer to obtain similar exemplars.



### References:

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown*, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

### Enhancement Activity/Outcome:

1. Research about the procedures and factors to be considered in collecting requested standard. In a three-minute video, demonstrate the process in collecting standards based on the situation provided.

Cici was found hanging inside her room. A suicide note was located at her study table. However, her parents refused to believe that she took her life. Hence, they forwarded the suicide note to a Questioned Document Examiner. After weeks of examination, the QDE ruled that it was not Cici's handwriting.

Few months later, Eduardo was arrested as prime suspect. To rule out Eduardo, the QDE needs to collect his handwriting to compare with the suicide note.

Suicide note: It is hand printed. The ball pen and paper used in Faber Castel and a yellow pad paper. The content of the suicide note is:

*Sorry, I had to do this. Please, water my plants and take care of my dog, Moondance. I love you!*

### Topic 8:

Process in Questioned Document Examination

### Objectives:

- A. Identify and employ the proper preparation and presentation of evidentiary documents for court trial.
- B. Examine questioned documents and standards following a systematic procedures.

**Instructional Materials:**

Video Discussion

**Teaching-Learning Activity/Lesson Proper**

\*To arrive at a conclusive and reliable conclusion as to whether the submitted questioned document(s) is/are written by one and the same person or two different individuals, questioned documents examiners must undergo rigid and thorough systematic scientific process on both the exemplars and the questioned document(s).

**LOGICAL PROCESS**

1. Ascertain the facts
2. Analyze the details
3. Qualify the case

**SCIENTIFIC METHODS**

1. Analysis
2. Comparison
3. Evaluation
4. Verification

**THE CARE OF DISPUTED DOCUMENTS AND DOCUMENTARY EVIDENCE:**

1. It should be kept unfolded and a separate, proper size envelope or folder
2. No photo-static copy, but a proper photograph or photo-enlargement
3. Should not be handled repeatedly by anyone
4. No touching, folding, refolding or pointing to certain parts of a document
5. Pointing the document with sharp material should not be used
6. NO test should be made to alter the condition of the document

**REPORTING INDICATIONS**

1. Wrote (made, prepared)
2. Strong Indications Wrote
3. Indications Wrote
4. Limited Indications Wrote
5. Can Be Neither Identified Nor Eliminated
6. Limited Indications Did Not Write
7. Indications Did Not Write
8. Strong Indications Did Not Write
9. Did Not Write

**Enhancement Activity/Outcome:**

1. All documents obtained at the crime scene and submitted for examination should be handled with care in order to maintain the value and integrity of the documents as evidence. During the examination, what should be conducted first – destructive or non-destructive examination? Justify your answer into 3-4 sentences.

**References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
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- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.
- WGDOC Terminology for Expressing Conclusions of Forensic Document Examiners
- SWGDOC Standard for Examination of Handwritten Items

**Topic 8:**

Alteration Of Documents And Disguised Writing

**Objectives:**

A. Identify different types of alterations and understand the nature of disguised writing.

**Instructional Materials:**

Video Discussion, YouTube videos

**Teaching-Learning Activity/Lesson Proper**

\*Alterations can take the form of erasures and replacement and/or insertion of material into a document.

**TYPES OF ALTERATIONS**

1. **Abrasion** – any forms of erasures using rubber eraser or scraped with a sharp object, such as knife or razor blade.
2. **Chemical Eradication** – Chemicals bleach the color from the ink and in some cases remove the ink from the paper.

3. **Obliterations** – the act of covering the material in question with an opaque substance.
4. **Insertion and Substitution**– one page or more pages is/are added or removed from the document
5. **Addition** – introduction of words/figures not originally part of the document
6. **Interlineations or Intercalation** – introduction of words/figures between lines.
7. **Folds** - folds in a document may indicate a substitution particularly if the folds in substituted pages do not match.
8. **Cut and paste**
9. **Electronic Alterations**

### **DISGUISED WRITING**

Natural writing refers to any specimen of writing executed normally without any attempt to control or alter its identifying habits and its usual quality and execution.

### **METHODS OF DISGUISED**

1. Change in slant
2. Altered letter forms
3. Use of block letters
4. Other hand writing
5. Change of Writing instrument
6. Change of speed

### **SIGNS OF DISGUISED**

1. Inconsistencies within the writing
2. Poor rhythm
3. Erratic movement followed by smooth rhythmic writing
4. Slowness and hesitation

### **SOLUTION OF A DISGUISED WRITING PROBLEM**

1. Collection and study of adequate standards which contain the fixed, occasional, rare, and accidental characteristics of the writer. Frequently the most difficult part of a case is locating good specimens.
2. Study of questioned writing to determine if it is normal handwriting containing natural variations or if it is disguised.
3. Comparison of questioned with standard writing methodically listing identifying (or non-identifying) characteristics of the handwriting, composition, arrangement, ink, writing instrument, paper, etc.

**Enhancement Activity/Outcome:**

1. Research about the different scientific examinations conducted during handwriting analysis. In a table, provide the best method/s for each problem.

Problems	Types of Examination/Equipment
1. Abrasion	
2. Chemical Eradication	
3. Obliteration	
4. Traced Forgery	
5. Indented Writing	
6. Charred Document	

**References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
- Osborn, Albert S. *Questioned Documents, a Study of Questioned Documents with an Outline of Methods by Which the Facts May Be Discovered and Shown, by Albert S. Osborn, ... With an Introduction by Professor John H. Wigmore, .. N.Y., 1910.*
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

**Topic 9:**

Materials Used to Create Documents

**Objectives:**

A. Understand the importance of watermark , writing instruments in the examination of a document

**Instructional Materials:**

Video Discussion, youtube videos

**Teaching-Learning Activity/Lesson Proper**

## **PAPER**

- ❖ These are sheets of interlaced fibers –usually cellulose fibers from plants, but sometimes from cloth rags or other fibrous materials, that is formed by pulping the fibers and causing to felt, or mat, to form a solid surface.

## **MANUFACTURING PAPER**

- ❖ Cooking process - the pulpwood will be chipped into small pieces that are then mixed with chemicals and fed into pressure vessels called digester to soften the lignin, which binds the fibers together.
- ❖ Washing, screening, cleaning, and, if necessary, bleaching to the desired brightness.
- ❖ Next, the fibers are combined with pigments, dyes, and sizing. These fibers flow onto a moving screen called a Fourdrinier, on which the fibers mat, forming a continuous sheet of paper with much of the water drawn through the screen into collection tanks to be recycled.
- ❖ Then, the web of pulp passes through heavy rollers, which press moisture from the sheet.
- ❖ Drying stage – evaporation of the remaining water in the pulp of fibers
- ❖ The paper then passes through series of calendar stacks that sooth the paper.
- ❖ Pressing process – the paper passes over a dandy roll, which imprints the watermark on the paper.

## **TYPES OF PAPERS FOR PRINTING OR WRITING**

- |                |  |
|----------------|--|
| A. Newsprint   | Least expensive paper manufactured.<br>Composed of ground wood<br>Principal asset is opacity |
| B. Bond paper  | Originally used to print stocks and bonds<br>Usually made from cottons                       |
| C. Lightweight | Uncoated papers<br>Usually made from manifold papers made from wood fibers                   |
| D. Specialty   | Coated on both sides to transfer date from one page to another<br>Contains special finishes  |
| E. Gummed      | For labels and it has curl-proof feature   |
| F. Text paper  | most expensive, uncoated papers<br>Used for announcements, invitations, and greeting cards   |
| G. Coated      | Used primarily in publications   |
| H. Bristol     | Used to make index cards and tag paper<br>Strength is the most important feature             |
| I. Kraft       | Coarse, unbleached, heavy paper<br>Paper bags, package wrapping, and corrugated boxes        |

## **PROPERTIES OF PAPER**

Paper contains many properties that are important considerations when determining how the paper will be used.

- Weight
- Strength – tensile strength and tear strength
- Durability
- Thickness
- Finish of the paper
- Water absorbability
- Presence of watermark

### **WATERMARK**

- This is a translucent distinctive designs of the manufacturer.

### **References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.
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- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification facts and fundamentals*. Boca Raton, FL: CRC Press.

### **Enhancement Activity/Outcome:**

1. In dating documents, papers are usually examined, especially watermarks. How does watermark pinpoints the estimated date of a certain document? Enumerate at least two methods and discuss it in 2-3 sentences only.

### **Topic 10:**

Materials Used to Create Documents and Typewriters

### **Objectives:**

- A. Remember the historical development of pen and typewriter necessary for dating the documents
- B. Understand the purpose and different process in pen/ink examination and typewriter examination

**Instructional Materials:**

Video discussions, Youtube videos

**Teaching-Learning Activity/Lesson Proper**

**HISTORICAL DEVELOPMENT OF PEN**



**HISTORICAL DEVELOPMENT OF PENCIL**





## DEVELOPMENT OF INK

Ink is a liquid solution containing dyes and/or pigments used to make visible marks on a writing surface.



## THREE TYPES OF INK

1. Water-based
2. Alcohol-based
3. Oil-based

## TYPEWRITERS

- ✓ It is a hand-operated character printer for printing written messages one character at a time.



## What are the defects in typewriter which form part individual characteristics?

1. Horizontal Mal-alignment – the character defectively strikes to the right or left of its normal allotted striking position.
2. Off its feet – heavier in one side or corner than over the remainder to its outline.
3. Rebound – character prints a double impress on with the lighter one slightly off act to the right or left.
4. Typeface Defects
5. Twisted Letters – characters become twisted so that they lean to the right or left of their correct slight
6. Vertical Mal-alignment – character printing above or below its proper portion
7. Clogged Typeface

## Enhancement Activity/Outcome:

1. Please refer to the LMS online quiz.

## References:

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.

- Michael, Allen. *Foundations of Forensic Document Analysis: Theory and Practice*. Wiley Blackwell, 2016.
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### Topic 10:

Computers and Printers

### Objectives:

A. Understand the characteristics of different printers

### Instructional Materials:

Youtube videos, Video discussions

### Teaching-Learning Activity/Lesson Proper

#### COMPUTERS AND PRINTERS

Most of the documents can be viewed electronically. Today's documents are typed on a computer, mistakes can be corrected unlike in typewriters, and documents can be reproduced and printed using word processing software possibly on one of several printers connected to the system.

Printers are important in identification of the source of a disputed document. There are certain properties of different printers which will separate a printer to another printer.

**TYPES OF PRINTER**

1. Dot Matrix – It has series of small pins that press against the ribbon and stamp the paper. A microscopic examination will show the round edges from the individual dots.
2. Ink Jet – It sprays the ink onto the paper configuring the letter designs in a way similar to the dot –matrix designs. The sprayed ink may run slightly, blurring the rough edges of the dots.
3. Laser printer – A light source such as a laser exposes a photosensitive drum in a pattern of tiny dots to form an image. Negatively charged toner clings to the positively charged, sensitized areas of the drum. The toner is transferred to the paper that has been given a positive charge. The toner is fused to the paper by heat and pressure.

**Enhancement Activity/Outcome:**

1. Following the table below, provide at least five differences of computers, typewriters and handwriting.

Handwriting	Computers	Typewriters

**References:**

- Koppenhaver, Katherine. (2007). Forensic document examination: Principles and practice. 10.1007/978-1-59745-301-1.
- Michael, Allen. Foundations of Forensic Document Analysis: Theory and Practice. Wiley Blackwell, 2016.