



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Forensic Science

GENERIC ELECTIVE UG
SEMESTER - II

FORENSIC HANDWRITING ANALYSIS

| COURSE CODE | CATEGORY | COURSE NAME | TEACHING & EVALUATION SCHEME | | | | | | | | | |
|-------------|----------|-------------------------------|------------------------------|---------------|----------------------|-------------------------|----------------------|---|---|---|---|---------|
| | | | THEORY | | | PRACTICAL | | | L | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | | |
| GEUFS203 | GE | Forensic Handwriting Analysis | 60 | 20 | 20 | 00 | 00 | 4 | 0 | 0 | 4 | |

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Th. - Theory

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES:

The course aims to provide the students with

1. Basics of historical development of handwriting
2. Examination of handwriting
3. Advancements in examination of handwriting

COURSE OUTCOMES:

After studying this course, the students will

1. Know historical perspective of handwriting.
2. Know standard procedure of examination of handwriting.
3. Understanding neurological diseases associated with handwriting examination.

UNIT-I

History of Questioned Document Examination, Origin of Alphabet, Writing Systems (Indian, American, English, French, etc.), Development of Handwriting, Factors Affecting the Development of Handwriting, Basis of Handwriting Identification, Handwriting Characteristics. Factors influencing handwriting: Different writing system, Substance abuse and handwriting, Aging and Handwriting, Genetic Factors, Accidental, Circumstantial, Deliberate.

UNIT-II

Principles of identification of handwriting. Individual characteristics & Factors affecting handwriting. Physiology of writing: Rules and physiological principles of handwriting. Definition & different handwriting systems. Influence of individuality on letter construction, connecting strokes, beginning and ending strokes. Features & Qualities of writing: Line quality, abbreviations, alignment, arrangement, connections, initial strokes, pen lifts, pressure, punctuations, rhythm, shading, size, slope, terminal strokes, tremor, etc. Writing instruments & materials and their influence

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GENERIC ELECTIVE UG SEMESTER - II

UNIT-III

Handwriting/Signature Examination: Handwriting examination: Understanding the objectives, Scope of handwriting examination, Sources of document examination, Forged and disguised handwriting, Science and art behind handwriting examination, Standard guidelines for handwriting analysis, Collection of specimen. Signature: Process of evolving a signature, Signature forgery, Method of examination. Kinematics of signature authentication: Isochrony in genuine, simulated and forged signatures, stroke direction, etc.

UNIT-IV

Automated Handwriting Examination Introduction to automated handwriting examination, acquisition of handwriting data, preprocessing and enhancement of handwriting, features for handwriting identification, feature selection and analysis, recognition of handwriting, performance evaluation and comparative study of existing handwriting examination software.

UNIT-V

Neural Abnormality and motor control: Neurological disease and motor control: Parkinson's disease, Palsy and Corticobasal degeneration, Essential tremors, Multiple System atrophy, Multiple Sclerosis, Huntington's disease, Lower Moto neuron Disease, Alzheimer's disease. Psychotropic Medication and motor control. Ageing and motor control

SUGGESTED READINGS:

1. Caliguri M P and Mohammed LA, Neuroscience of Handwriting, CRC Press.
2. Huber, A. R. and Headrick, A.M. (1999) : Handwriting identification : facts and fundamental CRC LLC
3. Ellen, D (1997) : The scientific examination of Documents, Methods and techniques. 2nd ed., Taylor & Francis Ltd.
4. Morris (2000) : Forensic Handwriting Identification (fundamental concepts and Principals)
5. Harrison, W.R. : Suspect Documents & their Scientific Examination, 1966, Sweet & Maxwell Ltd., London.
6. Hilton, O : The Scientific Examination of Questioned Document, 1982, Elsevier North Holland Inc., New York.
7. Sulner, H.F. : Disputed Document, 1966 Oceana Publications Inc., New York.
8. Saxena's : Saxena's Law & Techniques Relating to Finger Prints, Foot Prints & Detection of Forgery, Central Law Agency, Allahabd (Ed. A.K. Singla).
9. Quirke, A.J. : Forged, Anonymous & Suspet Documents, 1930, Reorge Rontledge & Sons Ltd., London.
10. Osborn, A. S. : Questioned Documents 1929, Boyd Printing Co., Chicago.
11. Levinson, J: Questioned Documents, 2000, Academic Press, Tokyo.

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