



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

Choice Based Credit System (CBCS)

B. Sc. with Major Forensics Science - Batch (2022-25)

SEMESTER- V

VOFS103 DIGITAL FORENSIC

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS	
			THEORY			PRACTICAL		L	T		P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
VOFS103	VC	Digital Forensic	0	0	0	60	40	0	2	4	4

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

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

Course Objectives: After studying this paper the students will know –

1. The basics of Digital Forensics.
2. Computer Crimes and their types
3. The cases which fall under the purview of Digital Crimes.
4. The types of Digital Crimes.
5. Elements involved in investigation of Digital Crimes.

Course Outcomes:

1. Types of Computer-crimes
2. Fundamentals of Computer components and Networking & Security.
3. Applications of Computer Forensic tools in Investigation.

Unit 1: Fundamentals and Concepts

Fundamentals of computers Hardware and accessories – development of hard disk, physical construction, CHS and LBA addressing, encoding methods and formats, Memory and processor, methods of storing data operating system, software, introduction to network, LAN, WAN and MAN.

Unit 2: Computer Crimes

Definition and types of computer crimes, Distinction between computer crimes and conventional crimes Reasons for commission of computer crimes, Breaching security and operation of digital systems.

Unit 3: Types of Computer Crimes

Computer virus, and computer worm – Trojan horse, trap door, super zapping, logic bombs. Types of computer crimes – computer stalking, pornography, hacking, crimes related to intellectual property rights, computer terrorism, hate speech, private and national security in cyber space, An overview of hacking, spamming, phishing and stalking.

Unit 4: Computer Forensics Investigations

Seizure of suspected computer, Preparation required prior to seizure, Protocol to be taken at the scene, Extraction of information from the hard disk.

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Unit 5: Examination of Exhibits

Treatment of exhibits, Creating bit stream of the original media, Collection and seizure of magnetic media, Legal and privacy issues, Examining forensically sterile media, Restoration of deleted files, Password cracking and E-mail tracking, Encryption and decryption methods, Tracking users.

Practicals:

1. Examination of cases related with e-mail bombing.
2. To examine different types of Malwares in System.
3. To recover data from any hard disk
4. Collection and seizure of magnetic media.
5. To study different methods of Encryption and decryption
6. To trace any e-mail and further examination
7. To crack a password of any system

Suggested Readings:

1. R.K. Tiwari, P.K. Sastry and K.V. Ravikumar, Computer Crimes and Computer Forensics, Select Publishers, New Delhi (2003).
2. C.B. Leshin, Internet Investigations in Criminal Justice, Prentice Hall, New Jersey (1997).
3. R. Saferstein, Criminalistics, 8th Edition, Prentice Hall, New Jersey (2004).

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