

LECTURE PLAN:-(OE-CS-402A)

NAME OF FACULTY : Er. Jyoti Sharma(Theory)

DISCIPLINE : B. Tech. Computer Science and Engineering

SEMESTER : VIIITH

SUBJECT : Cyber Security

LESSON PLAN DURATION : 15 weeks (Feb 2023-June 2023)

Work Load : L-2

LECTURE PLAN

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test)	Practical Day	Topic
1 st	1st	Fundamentals of Cyber Crime, Nature and Scope of Cyber Crime,	NA	NA
	2nd	Types of Cyber Crime: crime against individual, Crime against property		
2nd	3rd	Cyber extortion, Drug trafficking, cyber terrorism.	NA	NA
	4th	Cryptanalysis- steganography, stream and block ciphers, modern block ciphers: Block cipher principles		
3rd	5th	Shannon's theory of confusion and	NA	NA

		diffusion, fiestal structure		
	6th	Data Encryption Standard (DES), strength of DES		
4th	7th	differential and linear crypt analysis of DES, block cipher modes of operations, triple DES-AES	NA	NA
	8th	Integrity checks and authentication algorithms MD5 message digest algorithm, Secure Hash Algorithm (SHA), Digital Signatures		
5th	9th	authentication protocols, digital signature standards (DSS), proof of digital signature algorithm	NA	NA
	10th	authentication application, Kerberos and X.509		
6th	11th	Directory authentication service, electronic mail security, pretty good privacy (PGP), S/MIME.	NA	NA
	12th	Sessional 1		

7th	13th	Introduction to cyber attacks: passive attacks, active attacks, Cyber crime prevention methods,		
	14th	Application security (Database, E-mail and Internet), Data Security Considerations- Backups, Archival Storage and Disposal of Data, Security Technology- Firewall and VPNs		
8th	15th	Intrusion Detection, Access Control, Hardware protection mechanisms,	NA	NA
	16th	OS Security.		
9th	17th	Web Security: Secure socket layer and transport layer security-secure electronic transaction	NA	NA
	18th	Sessional 2		
10th	19th	(SET)- system security: Intruders- Viruses and related threats		
	20th	firewall design principles, trusted systems		
11th	21th	Digital Forensics: Introduction to Digital Forensics, historical	NA	NA

		background of digital forensics		
	22th	Forensic Software and Hardware, need for computer forensics science,		
12 th	23th	special tools and techniques digital forensic life cycle, challenges in digital forensic	NA	NA
	24th	Law Perspective: Introduction to the Legal Perspectives of Cybercrimes and Cyber security		
13 th	25th	Cybercrime and the Legal Landscape around the World, Why Do We Need Cyber laws	NA	NA
	26th	The Indian IT Act, Cybercrime Scenario in India,		
14 th	27th	Digital Signatures and the Indian IT Act	NA	NA
	28th	Cybercrime and Punishment.		
15 th	29th	Revision of Sessional	NA	NA
	30th	Sessional 3		