

Govt. Polytechnic for Women , Sirsa

Lesson Plan

Name of the Faculty: Smt. Anju Bala

Discipline: Computer Engg.

Semester: 6th

Subject: NETWORK SECURITY

Lesson Plan Duration: 15 weeks (from Mar, 2024 to Jun, 2024)

Work Load (Lecture/ Practical) per week (in hours): Lectures+Practicals- 03 +03

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical day	Topic
1st	1st	Need for securing a network, Principles, of Security	1st	Introduction About Network Security
	2nd	Type of attacks		
	3rd	introduction to cyber crime		
2nd	4th	cyber law-Indian Perspective (IT Act 2000 and amended 2008), cyber ethics,	2nd	Introduction About Network Security and types of Attacks
	5th	Ethical hacking. What is hacking? attacker, phreaker etc.		
	6th	TEST		
3rd	7th	Introduction to basic encryption and decryption	3rd	Installation of various antivirus software
	8th	Concept of symmetric		
	9th	asymmetric key cryptography		
4th	10 th	overview of DES	4th	Comparison of various antivirus software
	11 th	RSA and PGP		
	12 th	Introduction to Hashing		
5th	13 th	MD5, SSL, SSH.	5th	Study of various parameters of firewall. Installation and study of various parameters of firewall.
	14 th	HTTPS		
	15 th	Digital Signatures, Digital certification, IPSec		
6th	16 th	Revision and assignments	6th	Writing program in C to Encrypt/Decrypt using XOR key.
	17 th	TEST		
	18 th	Definitions, preventive measures		
7th	19 th	access control, checksum verification	7th	Writing program in C to Encrypt/Decrypt using XOR key.
	20 th	Process configuration		
	21 th	virus scanners		

8th	22 th	heuristic scanners	8th	Revision and Problem solving
	23 th	Application level virus scanners, Deploying virus protection.		
	24 th	TEST		
9th	25 rd	Definition and types of firewalls	9th	Study of VPN.
	26 th	Firewall configuration		
	27 th	Limitations of firewall.		
10 th	28 th	TEST	10 th	Study of VPN.
	29 ^h	Introduction; IDS limitations – teardrop attacks		
	30 th	counter measures		
11 th	31 th	Host based IDS set up	11 th	Study of various hacking tools.
	32 th	TEST		
	33 st	Handling Cyber Assets- Configuration policy as per standards		
12 th	34 rd	Disposable policy	12 th	Study of various hacking tools.
	35 th	Revision and assignments		
	36 th	TEST		
13 th	37 th	Basics, setting of VPN, VPN diagram	13 th	Practical applications of digital signature.
	38 th	configuration of required objects		
	39 th	exchanging keys, modifying security policy		
14 th	40 th	Disaster categories, network disasters	14 th	Practical applications of digital signature.
	41 th	cabling, topology, single point of failure,		
	42 th	save configuration files, server disasters		
15 th	43 th	UPS, RAID, Clustering, Backups, server recovery	15 th	Revision and Problem solving
	44 th	Revision		
	45 th	TEST		