

Lesson Teaching Plan

Subject: Computer Security
Semester: 5th

Branch: MCA
Faculty Name: Sucheta Panda

Module	Topic	No. of Classes
I	1. Meaning of Computer Security, Security Problem	1
	2. Kinds of Vulnerability, Threats	1
	3. Types of Threats, Method, Opportunity and Motive	1
	4. Security goal and Computer Criminal	1
	5. Ethical and Legal Issues	1
	6. Cryptanalysis, Cryptology, Plain text, Cipher text	1
	7. Substitution cipher, Examples additive cipher, mono-alphabetic cipher	2
	8. Transposition cipher, Rail-fence Cipher, Hill Cipher	1
	9. Data Encryption Standard, Design issues, Security in DES, Double and Triple DES, Weakness in DES	2
	10. AES Encryption Standard, Design issues, Difference between AES and DES	2
	11. Public and private key encryption, Uses of encryption	1
	12. RSA algorithm for encryption	1
II	1. Program Security, Secure Programs	1
	2. Non-malicious Program Errors, Viruses	1
	3. Other malicious codes, Targeted Malicious code	1
	4. Controls against program Threats	1
	5. Protection, General-purpose Operating System protected objects	1
	6. Methods of protection memory	1
	7. Addmens Protection, File Protection mechanisms	2
	8. User Authentication, Designing Trusted O.S.	1
	9. Security Policies, models of security	1
	10. Trusted O.S. design	1
	11. Assurance in trusted O.S.	1
	12. Implementation examples	1
III	1. Database Security, Security requirements	1
	2. Reliability and Integrity	1
	3. Sensitive data, Inference	1
	4. Multilevel database	1
	5. Proposals for multilevel security	1
	6. Security in Network	1
	7. Network Security controls, Firewalls	2
	8. Intrusion Detection systems	1
	9. Secure E-mail	1
	10. Threats in network	1
IV	1. Administering Security	1
	2. Security Planning	1
	3. Risk Analysis	1
	4. Organizational Security policies	1
	5. Physical Security	1
	6. Legal Privacy and Ethical Issues in Computer security	1
	7. Protecting program and data	1