Bharati College
(University of Delhi)
Janak Puri, Delhi- 100058
www.bharaticollege.du.ac.in

Lesson Plan (GE, Semester IV, JAN to MAY 2023)

Name of Teacher	Dr Vinesh Kumar	Department	Computer Science
Course	B.A (H) GE	Semester	IV
Paper	Information Security and Cyber Laws	Academic Year	2022-2023

Learning Objectives

The course aims to introduce the cyber threats, issues in information security, and contemporary cyber laws.

Learning Outcomes

On successful completion of this course, a student will be able to:
1. Enumerate issues in computer security.·
2. Enumerate and describe common forms of attacks.
3. Describe the importance of security policy in the security framework.
4. Describe security related terms like cryptography, privacy, steganography.
5. Describe the need for cyber laws, and important provisions of IT Act.

Lesson Plan

Week No.	Theme/Curriculum	Any Additional Information
1.	Introduction: Protection, security, risk, threat, flaw, vulnerability, exploit, attack, confidentiality, integrity, availability.	
2.	Introduction (contd.):Non-repudiation, authentication, authorization, ciphers, codes.	
3.	Introduction (contd.): Substitution cipher (Caeser), transposition cipher (Rail-Fence).	

4.	Introduction (contd.): Public key cryptography (definitions only), private key cryptography (definition and example), cyber forensics.	
5.	Risk Analysis and Threat: Risk analysis, process, key principles of conventional computer security, authentication, data protection.	
6.	Risk Analysis and Threat (contd.): Access control, internal vs external threat, security assurance, passwords.	
7.	Risk Analysis and Threat (contd.): Security policies, computer forensics and incident response.	
8.	Cyber Attacks and Digital Crime: DoS attack, man-in-the-middle attack, phishing attack, spoofing attack, spam attack, drive-by attack, password attack, SQL injection attack, cross-site scripting attack, eavesdropping attack.	
9.	Cyber Attacks and Digital Crime (contd.): Birthday attack, malware attack, social engineering attack, session hijacking attack, criminology of computer crime, cyber forensics, cyber foot prints.	
10.	Safety Tools and Issues : Firewalls, logging and intrusion detection systems, e-mail security	
11.	Safety Tools and Issues (contd.): Security issues in operating systems.	
12.	Safety Tools and Issues (contd.): Ethics of hacking and cracking. Cyber laws to be covered as per IT Act: Definitions: Digital certificate, Digital Signature And Electronic Signature, [Section 43].	
13.	Cyber laws to be covered as per IT Act: [Section 65], [Section 66A], [Section 66B], [Section 66C], [Section 66D].	
14. -15.	Cyber laws to be covered as per IT Act (contd.): [Section 66E], [Section 66F], [Section 67], [Section 67A], [Section 67B], [Section 72]. Information Security in India: Brief introduction of IT infrastructure for information security in India.	

References

1. Merkow, M. S., & Breithaupt, J. (2014). *Information Security Principles and Practices* (5th Edition). Pearson Education.

2. Snyder, G.R.F., & Pardoe, T. (2010). *Network Security*. Cengage Learning.

3. Whitman, M., & Mattod, H. J. (2015). *Principles of Information Security* (5th Edition). Cengage Learning.

Additional Resources

1. Basta, A., & Halton, W. (2008). *Computer Security: Concepts, Issues and Implementation*. Cengage Learning India.

2. Ross, A. (2001). *Security engineering*. John Wiley & Sons.