

FACULTY OF COMPUTER APPLICATIONS

- **Course** : BCA
- **Sem.** : 6
- **Subject Code** : 05BC0601
- **Subject** : **Information Security and Design**
- **Objective** : The objectives are as follow;
 1. To understand the basics of Information Security
 2. State the importance and identify where they are needed for security processes like authentication, access control, cryptography
 3. To know the legal, ethical and professional issues in Information Security
 4. To know the aspects of risk management.
 5. To know the technological aspects of Information Security
- **Prerequisites** : Basic knowledge of Network

Sr. No.	Course Content	Hours
1	Security problem in computing : <ul style="list-style-type: none"> ○ The meaning of Secure, Attacks, vulnerabilities, threats, control methods ○ opportunities and motive, Security goals and vulnerabilities, Types of ○ Computer criminals from armature to career criminals, Defense methods. 	10
2	Program security & Trusted OS : <ul style="list-style-type: none"> ○ Secure Programs, Finding faults, unexpected behavior, Types of Flaws, ○ Non malicious program errors, buffer overflow, incomplete mediation, ○ time related errors, combination of non-malicious program flaws ○ What is a trusted system, Military and commercial security policies, ○ models of security. 	12
3	Database security and Threats in networks <ul style="list-style-type: none"> ○ Integrity requirements, Element integrity, auditability, access control, ○ user authentication, Integrity, confidentiality, availability, 	10

FACULTY OF COMPUTER APPLICATIONS

	<ul style="list-style-type: none"> ○ Network vulnerabilities, who attacks networks, Reconnaissance, threats in transit, protocol flaws, integrity and confidentiality threats, website and other vulnerabilities, complex attacks 	
4	Network Security : <ul style="list-style-type: none"> ○ Threats in network, network security control, firewalls, Intrusion detection & prevention system, secure E-mail. 	08
5	Privacy in computing & Protecting programs and data <ul style="list-style-type: none"> ○ Privacy concepts, computer related privacy problems, US and non US ○ privacy policies, Identity theft, authentication and privacy ○ Copy rights, patents, trade secrets, protection of computer objects. 	08

- **Course Outcome:**

1. Describe system threats and vulnerabilities
2. Compare between different types of attacker
3. Able to describe security policy and models with controls
4. Available threats in database security and networking
5. How administrative and physical aspects controls the security

- **Main Reference:**

1. Security in computing, Charles P, Pfleeger, Shari Lawrence Pfleeger, 4th edition, PHI

- **Other References:**

1. Information security fundamentals by Thomas R Peltier, Justine Peltier John Blackley, Special Indian Edition, Auerbach

Chapter Wise Coverage from Text Book-1:
Chapter 1: Complete
Chapter 3: 3.1, 3.2
Chapter 5: 5.1, 5.2, 5.3
Chapter 6: 6.1, 6.2
Chapter 7: 7.2
Chapter 10: 10.1, 10.2, 10.3
Chapter 11: - 11.1
