

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Computer Engineering (IT Systems and Network Security)

Semester: II

Subject Name: Information System & Network Security

Subject Code: 725103

Course Content:

Basics of Information System, The changing nature of Information System, Threats of Information System Threats and attacks, Classification of Threads and attacks, Protecting Information System Security, Security in mobile and Wireless Computing, Credit Card frauds in mobile and wireless Computing, Security Policies and Measures in Mobile Computing, Information Security Management, Security Policy, Standards, Responsibility for Information Security Management, Building Blocks of Information Security, Basic principal of Information Systems Security, Information Security risk analysis, Term and Definitions for Risk Analysis of Information Security, Risk Management and Risk Analysis, Data Privacy Fundamentals, Attacks - Services – Mechanisms- Model of Network security.-OSI architecture, Conventional Encryption - Classical and Modern, Technique, Block Ciphers And The Data Encryption Standard, Cryptography Theory and Related Mathematics, Advanced Encryption Standard.Contemporary Symmetric Ciphers & Confidentiality Using Symmetric Encryption, RSA - Elliptic Curve Cryptography - Number Theory, Concepts-Key Management: Other Public Key Cryptosystems, Message Authentication And Hash Functions-Hash Algorithms, Digital Signatures And Authentication Protocols, Authentication Applications – Kerberos-X.509, Authentication Service

Text Book:

1. Information Security: Principles And Practices, Mark Merkow, James,Breithaupt/ Pearson

Reference Books:

1. Network Security Essentials By Stallings, Stallings William
2. Network Security: The Complete Reference