INT407:INFORMATION SECURITY AND PRIVACY

Course Outcomes: Through this course students should be able to

CO1 :: Define the security controls sufficient to provide a required level of confidentiality, integrity, and availability in an organization's computer systems

CO2 :: Explore the key technical tools available for security/privacy protection

CO3 :: Discover vulnerabilities critical to the information assets of an organization

CO4 :: Differentiate unethical and illegal behavior in information security

CO5 :: Review major standards that relate to the practice of information security

CO6 :: Understand authentication methods by using biometrics as an authentication method

Unit I

Information Systems : Information system security & threats, meaning and importance of information systems, information security and privacy threat

Building Blocks of Information Security : principles, terms and three pillars of information security, risk management & risk analysis, information classification, approaches and considerations for risk analysis

Unit II

Threats : new technologies open door threats, level of threats: information, network Level, classifications of threats and assessing damages

Program security : overview of program security, types of flaws, viruses and other malicious code, controls against program threats, covert channels

Unit III

Biometrics Controls for Security : access control, user identification & authentication, biometric techniques, face recognition and related issues, key success factors, advanced minutiae based algo

Unit IV

Security standards and policies : intro to ISO 27001. COBIT, SSE-CMM, policies and their elements, HIPAA security guidelines, methodologies for information system security.: IAM, IEM, SIPES.

Unit V

Security metrics and trusted system : Security matrix, Classification, Privacy vs security, Security Models, Trusted OS Design and Principles, Security features of Trusted OS

Unit VI

Privacy Technological Impacts : Impact of information technology on privacy of an individual, Affect of web technologies on privacy, RFID related privacy issues, Internet related privacy issues

Text Books:

1. INFORMATION SYSTEMS SECURITY WILEY PUBLICATIONS by NINA GODOLE, WILEY

References:

1. NETWORK SECURITY: THE COMPLETE REFERENCE ROBERTA: TATAMCGRAW HILL by BRAGG,, MCGRAW HILL EDUCATION