UNIT III

Analyzing Deviant Socio-Technical Behaviors Using Social Network Analysis and Cyber Forensics-Based Methodologies, **Tools and Datasets for Cybersecurity :** Security Tools, Data and Research Initiatives for Cybersecurity Analysis.   **(12 hours)**

TextBooks:

(1). "Big Data Analytics in Cybersecurity", Onur Savas, Julia Deng, CRC Press, 2017

(2). "Data Analytics and Decision Support for Cybersecurity", Iván Palomares Carrascosa, Harsha Kumara Kalutarage, Yan Huang, Springer, 2017

(3). "Darkweb Cyber Threat Intelligence Mining", John Robertson, Ahmad Diab, Ericsson Marin, Eric Nunes, Vivin Paliath, Jana Shakarian, Paulo Shakarian, Cambridge University Press, 2017

(4). "Data Analysis for Network Cyber-Security", Niall Adams, Nicholas Heard, Imperial College Press, 2014

CSCO 512 : Strategic Governance of Cybersecurity Risks and Control Mechanisms II

CO1 : To make students aware of the strategic governance of the ICT resources in a business entity or corporate house or government establishment, to thwart the cyberattack and data leakage.

CO2: To make competent in risk assessment and analysis in case of a cyberattack

CO3: To make students aware of the frameworks and policies governing the data privacy in different domains and the need to be compliant with them.

CO4: To make the students aware of the different security control mechanisms available and how they can be implemented and assessed.

UNIT I

Risk Management and Prioritization Using a Control Perspective : Ensuring that Risk Management Process Supports the Organization, Five Elements of the Risk Management Process, **Control Formulation and Implementation Process :** The Control Formulation Process, Creating and Documenting Control Objectives

<div align="right">**(12 hours)**</div>

UNIT II

Creating a Management-Level Control Process, Assessing Control Performance, Developing a Comprehensive ICT Security Control Program **Security Control Validation and Verification:** Security Control Assessment Fundamentals, NIST Security Control Assessment Process, Control Testing and Examination Application.

<div align="right">**(12 hours)**</div>

UNIT III

Control Framework Sustainment and Security of Operations : Operational Control Assurance: Aligning Purpose with Practice, Operational Assurance (Sensing), Analysis, Response Management (Responding), Operational Oversight and Infrastructure Assurance of Control Set Integrity. **(12 hours)**

TextBooks

(1). "The Complete Guide to Cybersecurity Risks and Controls", Anne Kohnke, Dan Shoemaker, Ken Sigleer, Internal Audit and IT Audit Series, CRC Press Taylor & Francis Group, 2016

(2)."Securing an IT Organization through Governance, Risk Management, and Audit", Ken Sigler , Dr. James L. Rainey, Internal Audit and IT Audit Series, CRC Press Taylor & Francis Group, 2016

(3). "A Guide to the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework (2.0)", Anne Kohnke, Dan Shoemaker, Ken Sigleer, Internal Audit and IT Audit Series, CRC Press Taylor & Francis Group, 2016

(4). "Cybercrimes: A Multidisciplinary Analysis", Sumit Ghosh, Elliot Turrini, Springer, 2010