Course: 602 – E-Commerce and Cyber Security

Course Code	602
Course Title	E-Commerce and Cyber Security
Credit	4
Teaching / Week	4 Hours / Week (Suggested) (Total Minimum 48 Hours)
Minimum Weeks/Semester	15 Weeks (Including Class work, preparation, Examinations etc.)
Review/Revision	2021-2022
Implementation Year	2022-2023 A.Y.
Purpose of Course (POC)	To make students aware of e-Commerce, Cyber Security, Cyber Crime and Cyber Laws
Course Objective	To impart basic knowledge of e-Commerce, Cyber Security, Cyber Crime & Cyber Law
Pre-requisite	Fundamental Knowledge of Networking, Web Applications & Database
Course Outcome	The students will get the basic knowledge of e-Commerce, Cyber Security, Cyber Crime & Cyber Law and hence will help them in developing secured applications and will make them aware of various Cyber Laws

Content	**Unit 1:** Introduction to Electronic Commerce
	1.1 Concepts of e-Commerce
	1.2 Aims of e-Commerce
	1.3 e-Commerce Framework
	1.4 e-Commerce Consumer Applications
	1.5 e-Commerce Organizational Applications
	1.6 Introduction to m-Commerce
	
	Unit 2: Network Infrastructure of e-Com , Payment and Security:
	2.1. Concepts of Information Way
	2.2. Components of I-Way
	   2.2.1. Network Access Equipment
	   2.2.2. Local on-ramps
	   2.2.3. Global Information Distribution Network
	2.3. Transaction Models
	2.4 e-Commerce Payments and Security Issues
	   2.4.1. e-Commerce Payment Systems
	   2.4.2. Debit Card Based, Credit Card Based ,. Risks & EPS
	   2.4.3. e-Cash, e-Cheque, e-wallet
	2.5. Security on Web, SSL
	
	Unit-3: Introduction to Cyber Crimes:
	3.1 Category of Cyber Crimes
	3.2 Technical Aspects of Cyber Crimes
	   3.2.1 Unauthorized access & Hacking
	   3.2.2 Trojan, Virus and Worm Attacks
	   3.2.3 E-Mail related Crimes: Spoofing, Spamming, Bombing
	   3.2.4 Denial of Service Attacks
	   3.2.5 Distributed Denial of Service Attack
	3.3 Various crimes :
	3.3.1 IPR Violations (Software piracy, Copyright Infringement, Trademarks Violations, Theft of Computer source code, Patent Violations)
	3.3.2 Cyber Squatting, Cyber Smearing, Cyber Stacking
	3.3.3 Financial Crimes: (Banking, credit card, Debit card related)
	
	Unit-4:
	4.1 Concepts of Cyber Security:

	4.1.1 Types of Threats
	4.1.2 Advantages of Cyber Security
	4.2 Basic Terminologies:
	4.2.1 IP Address, MAC Address
	4.2.2 Domain name Server(DNS)
	4.2.3 DHCP, Router, Bots
	4.3 Common Types of Attacks:
	4.3.1 Distributed Denial of Service
	4.3.2 Man in the Middle, Email Attack
	4.3.3 Password Attack, Malware
	4.4 Hackers:
	4.4.1 Various Vulnerabilities:
	4.4.1.1 Injection attacks, Changes in security settings
	4.4.1.2 Expouser of Sensitive Data
	4.4.1.3 Breach in authentication protocol
	4.4.2 Types of Hackers: White hat and Black hat
	Unit-5:
	5.1 Ethical Hacker
	5.1.1 Roles and Responsibilities
	5.1.2 Benefit of Ethical Hacking
	5.1.3 Skills require to become Ethical hacker
	5.2 Penetration testing concepts
	5.2.1 Phases of Ethical hacking
	5.2.2 Areas of penetration testing
	5.3 SQL Injection:
	5.3.1 Concepts of SQL Injection
	5.3.2 Types of SQL Injection
	5.3.3 Case study of SQL Injection
	5.4 Firewall:
	5.4.1 Concepts of Firewall
	5.4.2 Types of Firewall
	5.4.3 Working, Advantages and Importance of Firewall
	[All Units carry Equal Weightage]
Reference Book	1. Frontiers of Electronic Commerce, Ravi Kalakota and Andrew Whinston, Addition Wesley
	2. Electronic Commerce: A Managerial Perspective, Efraim turban, Jae Lee, David King, H. Michel Chung, Addition Wesley
	3. E-Commerce: An Indian Perspective, Joseph, PHI
	4. E-Mail Hacking, Ankit Fadia, Vikas Publishing House Pvt. Ltd.
	5. e-Commerce Concept, Models Strategies, G.V.S. Murthy, Himalaya Publisher
	6. Cyber Crime in India, Dr M Dasgupta, Centax Publications Pvt Ltd
	7. Cyber Laws and Crimes, Barkha U, Rama Mohan, Universal Law Publishing Co. Pvt Ltd.
	8. Cyber Crime, Bansal S.K., A.P.H. Publishing Corporation
	9. Cyber Security Understanding Cyber Crime, Computer Forensic and Legal Perspectives, Nina Godbole, Sunit Belapur, Willey India Publication
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.