

Semester Lecture Plan

Name of the College: Government College of Arts, Science and Commerce, Sanquelim - Goa							
Name of Faculty: Bhakti Gawas		Subject: Computer Science					
Paper code: CSC-133 Title of the Course: Cyber Security Essentials		Program/Course: F.Y.B.A.			Division: -		
Academic year: 2025 - 2026		Semester: I			Total Lectures: 45		

Course Objectives:

To introduce principles of cyber security and have an understanding on the cyber-crimes taking place.

- To have an understanding of the existing legal framework and laws on cyber security.
- To enable students to adopt safe practices when using social media platforms and digital payment systems.

Course Learning Outcome:

At the end of the course, learner will be able to:

CO1. Remember the concept of Cyber Crime & Cyber security and issues and challenges associated with it.

CO2. Understand the nature of cybercrimes, legal remedies and as to how to report the crimes through available platforms and procedures.

CO3. Explain various privacy and security concerns on online social media and the reporting procedure of inappropriate content, underlying legal aspects and best practices for the use of social media platforms.

CO4. Explain the basic concepts related to E-Commerce and digital payments, digital payment modes and related cyber security aspects, RBI guidelines and preventive measures against digital payment frauds.

Month	Lectures		No. of lectures allotted	Topic, Subtopic to be covered	Learning outcome	ICT Tools	Reference books
	From:	To:					
December	1-12-2025	6-12-2025	3	1. Introduction to Cyber security & Cyber crime and Cyber law Defining Cyberspace and Overview of Computer and Web-technology, Architecture of cyberspace	1. Introduction to Cyberspace. 2. Basic Computer and web concepts 3. Understand how cyberspace is structured	Laptop, LCD Projector, PowerPoint Presentation	Nina Godbole, SunitBelapure (2011), " <i>Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives</i> ", 1 st Edition, Wiley India Pvt. Ltd. Internet, Youtube
	8-12-2025	13-12-2025	3	Communication and web technology, Internet, World Wide Web, Advent of internet, Internet infrastructure for data transfer and governance, Internet society	1. How data is shared over the web. 2. Understand the concept of Internet and www 3. Evolution and development of Internet 4. Safe use of Internet in brief		

	15-12-2025	23-12-2025	2	Internet infrastructure for data transfer and governance, Internet society, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security.	1. Data Travels Online 2. how cyberspace is controlled and regulated. 3. cyber security and its challenges.		
January	02-01-26	10-01-26	4	Classification of cyber-crimes, Common cyber-crimes, cyber-crime targeting computers and mobiles, cyber-crime against women and children, financial frauds, Social engineering attacks, malware and ransomware attacks, zero day and zero click attacks	1. Different types of Cybercrime. 2. Common cyber-attacks on devices. 3. different ways of cyber related attacks. 4. Recognize social and financial cybercrimes.	Laptop, LCD Projector, PowerPoint Presentation	
	12-01-26	17-01-26	3	Cybercriminals modus-operandi, reporting of cyber-crimes, Remedial and mitigation measures, Legal perspective of cyber-crime, IT Act 2000 and its amendments, Cyber-crime and offenses,	1. how to report cybercrimes and stay safe. 2. About The Information Technology Act, 2000 3. About IT (Amendment) Act, 2008		

				Organizations dealing with Cybercrime and Cyber security in India, Case studies.	4. Basic cyber laws with real examples.		
19-01-26	24-01-26	3	Unit 2: Social Media Overview and Security Introduction to Social networks. Types of Social media, Social media platforms, Social media monitoring, Hashtag, Viral content, Social media marketing		1. Introduction to Social Network and how they are used. 2. Identify different types of Social Media Platforms. 3. Learn about common Social Media Platforms. 4. Hashtag, Viral Content 5. Introduction to Social Media Marketing.		Henry A. Oliver (2015), "Security in the Digital Age: Social Media Security Threats and Vulnerabilities", Create Space Independent Publishing Platform. Internet, Youtube
27-01-26	31-01-26	3	Flagging and reporting of inappropriate content, Laws regarding posting of inappropriate content, Best practices for the use of social media, Case studies		1. report misuse and understand basic social media laws. 2. safe and responsible use of social media. 3. real-life social media issues through examples.	Laptop, LCD Projector, PowerPoint Presentation	

February	02-2-26	07-2-26	3	Definition of E- Commerce, Main components of E-Commerce, Elements of E-Commerce security , E-Commerce threats, E-Commerce security best practices	1. Introduction to E-Commerce. 2. Main parts of E-Commerce System. 3. Basic Security needs in E-Commerce. 4. Recognize common threats in online transaction. 5. Learn safe Practices for online shopping.	
	09-02-26	14-02-26	3	Introduction to digital payments, Components of digital payment and stakeholders, Modes of digital payments- Banking Cards, Unified Payment Interface (UPI), e-Wallets Unstructured Supplementary Service Data (USSD), Aadhar enabled payments	1. Understand Digital payments and their benefits. 2. Different payment methods like cards, UPI, wallets, net banking. 3. USSD, and Aadhaar payments. 4. how USSD-based payments work without internet access. 5. Secure banking transactions using USSD codes.	
	16-02-25	21-02-26	3	Digital payments related common frauds and preventive measures. RBI guidelines on digital payments and customer protection in unauthorized banking transactions. Relevant provisions of Payment Settlement Act,2007	1. Digital frauds and prevention methods. 2. Customer rights and safety guidelines by RBI. 3. Basic legal rules related to digital payments.	

	23-02-26	28-02-26	3	<p>4. Digital Devices Security, Tools and Technologies for Cyber Security</p> <p>End Point device and Mobile phone security, Password policy, Security patch management Data Backup</p>	<ol style="list-style-type: none"> 1. Protect computers and mobile phones. 2. Create and manage strong passwords. 3. Importance of updating software for security. 4. methods to backup data safely. 	Laptop, LCD Projector, PowerPoint Presentation	EricMaiwald (2017), <i>"Fundamentals of Network Security"</i> , McGraw Hill Education.
March	02-03-26	07-03-26	3	<p>Downloading and management of third-party software, Device security policy, Cyber Security best practices</p>	<ol style="list-style-type: none"> 1. Safe downloading and Management of Software. 2. Basic rules for secure device usage. 3. safe online behavior and security habits. 		
	09-03-26	14-03-26	3	<p>Significance of host firewall Importance and types of Ant-virus, Management of host firewall</p>	<ol style="list-style-type: none"> 1. Role of a host firewall in protecting a computer 2. Monitoring and controlling incoming and outgoing network traffic 3. Enable, configure, and manage basic firewall settings 4. Different types of anti-virus and its application. 		

	16-03-26	21-03-26	3	Wi-Fi security, Configuration of basic security policy and permissions Revision	<ol style="list-style-type: none"> 1. Wi-Fi security risks 2. Concept of Encryption and Decryption. 3. Safe configuration settings to prevent unauthorized access. 4. Basic Security policies. 5. User permission to access different files, applications and system 	
	23-03-26	28-03-26	3	Revision	-----	-----