

Semester Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim - Goa

Name of Faculty: Yougali Parab

Subject: Computer Science

Paper code: CSC-247 Awareness of Cybercrime and cyber security

Program/Course: F.Y.B.Sc.

Division:

Academic year: 2025 - 2026

Semester: I

Total Lectures: 30

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:

On completion of the course, students 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 cyber-crimes, 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. 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 From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Learning outcome	ICT Tools	Reference books
July/August	29/07/2025	02/08/2025	02	Unit 1: Cyber Crime against Individuals and Organizations Cyber Crime - Overview, Internal and External Attacks, Attack Vectors. Cybercrimes against Individuals - E-mail spoofing and online frauds. Phishing and its forms	1. explain various types of cybercrimes 2. recognize and prevent threats	Laptop, LCD Projector, PowerPoint Presentation	Introduction to Cyber Security" – Chwan-Hwa (John) Wu & J. David Irwin
August	04/08/2025	09/08/2025	02	Spamming, Cyber- defamation, Cyberstalking, Cyber Bullying and harassment Computer Sabotage, Pornographic offenses Password Sniffing. Keyloggers and Screen loggers. Cyber Crimes against Women and Children.	1. Explain different forms of cybercrimes 2. identify methods of unauthorized data capture	Laptop, LCD Projector, PowerPoint Presentation	Cybersecurity and Cyberwar: What Everyone Needs to Know" – P.W. Singer & Allan Friedman

August	11/08/2025	16/08/2025	01	Cybercrime against organization - Unauthorized access of computer	1. Describe and analyze cybercrimes targeting organizations 2. Evaluate the risks, impacts, and preventive measures	Laptop, LCD Projector, PowerPoint Presentation	"Cyber Crime and Security" – Prof. Pavan Duggal
				Password Sniffing			
				Denial-of-service (DOS) attack, Backdoors and Malwares and its types			
August	18/08/2025	23/08/2025	02	E-mail Bombing, Salami Attack, Software Piracy, Industrial Espionage, Intruder attacks.	1. explain organizational cybercrimes 2. understand the implications of security policy violations	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity and Cyberwar: What Everyone Needs to Know" – P.W. Singer & Allan Friedman
				Security policies violations Crimes related to social media			
August	25/08/2025	30/08/2025	00	Chaturthi Vacation	-	-	-

September	02/09/2025	06/09/2025	02	ATM, Online and Banking Frauds. Intellectual	1. explain various financial and intellectual property frauds 2. understand global perspective on cybercrimes	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity and Cyberwar: What Everyone Needs to Know" – P.W. Singer & Allan Friedman
				Property Frauds.			
				Unit 2: Global perspective on Cybercrimes and Cyber Security			
				A global perspective on cybercrimes Phases of cyber-attack Reconnaissance			
September	08/09/2025	13/09/2025	02	Passive Attacks, Active Attacks, Scanning,	1.differentiate between passive and active attacks 1.understand detection avoidance strategies used by attackers	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity and Cyberwar: What Everyone Needs to Know" – P.W. Singer & Allan Friedman
				Gaining Access, Maintaining Access			
				Lateral movement and Covering Tracks. Detection Avoidance			
September	15/09/2025	20/09/2025	02	Information Classification	1. understand the principles of information classification 2. explain and apply security policies, standards, procedures	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity and Cyberwar: What Everyone Needs to Know" – P.W. Singer & Allan Friedman
				Policies			
				Standards, Procedure and Guidelines.			

September	22/09/2025	27/09/2025	02	Avoidance, Types of Attack vectors	1. identify different types of attack vectors 2. gain overview of common network-based attacks	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity Essentials" – Charles J. Brooks, Christopher Grow, Philip Craig, Donald Short
				Zero-day attack			
				Overview of Network based attacks.			
September/ October	29/09/2025	04/10/2025	02	Introduction to Cyber Security.	1. explain the fundamentals of cybersecurity 2. apply risk management, assessment, and analysis techniques	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity Essentials" – Charles J. Brooks, Christopher Grow, Philip Craig, Donald Short
				Confidentiality, Integrity and Availability - Triad.			
				Attacks: Threats, Vulnerabilities and Risk			
				Risk Management, Risk Assessment and Analysis.			
October	06/10/2025	11/10/2025	02	Controls: Physical, Logical and Administrative; Security Frameworks	1. describe physical, logical, and administrative controls 2. understand various authentication factors	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity Essentials" – Charles J. Brooks, Christopher Grow, Philip Craig, Donald Short
				Defense in-depth: Layers of security.			
				Authentication - Factors.			
October	13/10/2025	18/10/2025	02	Authorization and Access Controls- Models, Methods and Types of Access Control	1. explain the concepts of authorization and access control	Laptop, LCD Projector, PowerPoint Presentation	"Cybersecurity Essentials" – Charles J. Brooks, Christopher Grow, Philip Craig, Donald Short
				Revision			

