



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB03096021

Course / Subject Name : Cyber Security

w. e. f. Academic Year:	2025-2026
Semester:	3
Category of the Course:	Major Subject 2

Prerequisite:	Any Graduate
Rationale:	This course aims to equip students with a foundational understanding of cyber security concepts, real-world threats, defensive tools, and legal frameworks. The course emphasizes practical knowledge combined with strategic application suitable for IT managers, security consultants, and business leaders.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand core cyber security concepts, threats, and controls.	Remember, Understanding
02	Apply vulnerability scanning and defense tools in network and web security.	Remember, Understanding, Application
03	Analyze cybercrimes and legal responses through case-based learning.	Remember, Understanding, Create
04	Evaluate strategic decisions in cyber security governance and incident response.	Evaluate

*Revised Bloom's Taxonomy (RBT)

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	P	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	1	0	4	70	30	50	0	150

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	Introduction to Cybercrime: <ul style="list-style-type: none"> Cyber Crime 	12	17



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB03096021

Course / Subject Name : Cyber Security

	<ul style="list-style-type: none"> ○ Definition and Origin of the Word ○ Cyber Crime and Information Security ○ Who are Cyber Criminals ○ Classification of Cybercrimes ○ E-mail Spoofing, Spamming, Cyber Defamation ○ Internet Time Theft ○ Salami Attack, Salami technique Data Diddling, Forgery, Web Jacking ○ Newsgroup Spam, Industrial Spying, Hacking, Online Frauds, Pornographic Offenders, Software Piracy, Computer Sabotage Email Bombing, Computer Network Intrusions, Password Sniffing, Credit Card Frauds, Identity Theft <p>Legal Perspectives of Cyber Crime:</p> <ul style="list-style-type: none"> ● Indian Perspectives ● Need of Cyber Laws ● The Cyber Crime And Indian ITAct 2000/2001 ● Hacking and Indian Laws <p>Global Perspective on Cyber Crime</p>		
2.	<p>Introduction to Cyber security and Threat Landscape</p> <ul style="list-style-type: none"> ● Basics of Cyber security: Definitions, Goals (CIA Triad), Importance for businesses ● Threats, Vulnerabilities, and Attacks: Harm, Types of Threat Actors ● Controls: Authentication, Access Control Models, Introduction to Cryptography ● Introduction to Kali Linux: Overview, Features, and Use in Penetration Testing Web Attacks: <ul style="list-style-type: none"> ○ Browser Attacks ○ Web Attacks Targeting Users ○ Data Theft (User/Website) ○ Email-based Attacks (Spoofing, Phishing) ● Network Vulnerabilities: <ul style="list-style-type: none"> ○ Vulnerability Scanning Overview ○ Tools: OpenVAS, Metasploit ○ Open Port/Service Identification, Version Check, Traffic & Vulnerability Probes ● Sniffers and Injection tools. 	11	18



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB03096021

Course / Subject Name : Cyber Security

3.	<p>Network Defense Tools and Techniques</p> <ul style="list-style-type: none">• Firewalls and Packet Filters: Firewall Basics, Packet Filter Vs Firewall, How a Firewall Protects a Network, Packet Characteristic to Filter, Stateless Vs Stateful Firewalls, Network Address Translation (NAT) and Port Forwarding.• VPN: the basic of Virtual Private Networks.• Firewall: Introduction, Linux Firewall, Windows Firewall.• Snort: Introduction Detection System. <p>Web Application Security and Tools(overview)</p> <ul style="list-style-type: none">• Scanning for web vulnerabilities tools: Nikto, W3af,• HTTP utilities - Curl, OpenSSL and Stunnel.• Application Inspection tools – Zed Attack Proxy, Sqlmap, DVWA, Webgoat.• Password Cracking and Brute-Force Tools: John the Ripper, LOhtcrack, Pwdump, HTC-Hydra. <p>AI-based Security Detection Tools Overview of how Artificial Intelligence is used to detect anomalies, threats, and malware in real-time cybersecurity monitoring</p> <p>Norton Security Software Overview of Norton antivirus and internet security suite; role in endpoint protection, threat detection, and prevention</p>	11	17
4.	<p>Cyber Laws and Investigation</p> <ul style="list-style-type: none">• Internet crime and Act: A Brief History of the Internet, Recognizing and Defining Computer Crime, Contemporary Crimes, Computers as Targets, Contaminants and Destruction of Data, Indian IT ACT 2000.• Firewalls and Packet Filters, password Cracking, Keyloggers and Spyware, Virus and Worms, Trojan and backdoors, Steganography, DOS and DDOS attack, SQL injection, Buffer• Overflow, Attack on wireless Networks.	11	18
5.	<p>Practical:</p> <ul style="list-style-type: none">• Cybercrime: Examples and Mini cases• Study identity theft cases, analyze methods of attack, and discuss security measures to protect personal and corporate information.• Study and report on a real-world data breach to understand the vulnerabilities exploited and consequences.	15	CEC(30 Marks)



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB03096021

Course / Subject Name : Cyber Security

	<ul style="list-style-type: none"> Analyze and present case studies of phishing attacks, identifying techniques, targets, and prevention methods. 		
Total		60	100

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	U Level	A Level	N Level	E Level	C Level
20%	30%	25%	0%	15%	10%

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

No.	Author	Title	Publisher	Edition
1	William Stallings	Cryptography and Network Security	Pearson	Latest
2	Michael T. Goodrich	Introduction to Computer Security	Pearson	Latest
3	Nina Godbole & Sunit Belapur	Cyber Security : Understanding Cyber Crimes , Computer Forensics and Legal Perspectives	Wiley	2011
4	Prof. Dr. Marco Gercke	Understanding cybercrime: Phenomena and legal challenges Responses	ITU 2012	Latest

(b) Open source software and website:

- <https://www.tpointtech.com/cyber-security-tutorial>
- <https://www.geeksforgeeks.org/cyber-security-tutorial/>

CO- PO Mapping:

Semester 3	Course Name : Cyber Security				
	POs				
Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1	3	2	1	0	0
CO2	2	3	3	2	0
CO3	1	2	3	2	1
CO4	2	2	3	3	2
CO5	-	-	-	-	-

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.
