UDHNA CITIZEN COMMERCE COLLEGE &
SPB COLLEGE OF BUSINESS ADMINISTRATION &
SMT. DIWALIBEN HARJIBHAI GONDALIA COLLEGE OF BCA & I.T.
(Managed by: Udhna Academy Education Trust, Surat)

SYLLABUS OF CERTIFICATE COURSE (Attachment-1)

Course Title:	**INFORMATION PROTECTION USING CYBER SECURITY(Level-1)**	
Course Credits:	2	
Course Hours:	30 (15 Hours Theory + 15 Hours Practical)	
Course Duration:	15 Days	
Eligibility:	First Year BCA/BBA/B.Com.	
Course Objective:	To provide basic and interim level knowledge to the students about cyber security and to protect electronic devices' information from cyber attack	
Expected Outcome:	The student will be able to safeguard information available in computer system or personal devices from vulnerabilities and cyber-attack.	
Method of Instruction:	Class work/lectures, group discussion, seminar, case study, self study, practical.	
Evaluation Method:	Multiple Choice Question (MCQ)/Theory/PracticalExam., Assignments. *Students who scored passing marks will get certificate.*	
	COURSE CONTENT	
		Teaching Hours
Unit-1:	**Fundamentals**	**04 Th.**
	1.1 What is Cyber security?	2 Th.
	1.2 History, Evolution and standards of cyber security	
	1.3Cyber security industry	
	1.4 Types of Cyber security	2 Th.
	1.5 Applications of Cyber security	
Unit-2:	**Cyber Threats& Suggested Security Measures**	**04 Th.** **04 Pr.**
	2.1 Malware	1 Th.
	2.2 Phishing	
	2.3 E-Mail related frauds	
	2.4 Sql injection	1 Th.
	2.5 Cross-Site Scripting (XSS) & Cross-Site Request Forgery (CSRF)	1 Th.
	2.6 Zero-Day &DDoS Attacks	1 Th.
	2.7 Practical Case study based on Unit-2	4 Pr.
Unit-3:	**Cryptography, Authentication, & Authorization**	**02 Th.** **04 Pr.**

	3.1 Encryption& Cryptography	1 Th.
	3.2 Decrypt secret message	
	3.3 Authentication & Authorization	1 Th.
	3.4 Online secure transaction	
	3.5 Practical Case study based on Unit-3	4 Pr.
Unit-4:	**Network security basics**	**02 Th.** **04 Pr.**
	4.1 Network security basics	1 Th.
	4.2 Network devices security (Firewalls, Routers, Hub, Switch, Hotspot, Bluetooth and Infrared)	1 Th.
	4.3 Practical Case study based on Unit-4	4Pr.
Unit-5:	**Security of personal devices**	**03 Th.** **03 Pr.**
	5.1 Basics of Security of personal devices	1 Th.
	5.2 Best practice to secure personal devices, social media	1 Th.
	5.3 Hardening your device (Windows & Linux)	1 Th.
	5.4 Practical Case study based on Unit-5	3 Pr.
	Total Hours (15 Th. + 15 Pr.)	**30**
Reference Books:	1) James Graham, Richard Howard and Ryan Olson, CYBER SECURITY ESSENTIALS, CRC Press	
	2) AnkitFadia, Network Security - A Hacker's Perspective, Infinity Press.	
	3) Aamer Khan, Mastering Cyber Security 2022, Hack Book Work.	
	4) Cyber security for Beginners, Raef Meeuwisse, Cyber Simplicity Limited.	
	5) Fundamentals Of Cyber Security, Maynak Bhushan, Rajkumar Singh Rathore and AAtif Jamshed, BPB Publication.	
	6) Cyber Security, Nina Godbole, Sunit Belapure, Wiley.	
	7) Cryptography and Network Security - Principles and Practice, William Stallings, Pearson Education.	

Suggested Practical Problems:

1) Practical on security, detection and solutions ofMaleware.
2) Practical on security, detection and solutions of Phishing.
3) Practical on email frauds such as Email spoofing, Sending malicious codes through email, Email bombing, Sending threatening emails, Defamatory emails and other Email frauds.
4) Practical on security, detection and solutions of sql injection.
5) Practical on security, detection and solutions of XSS, CSRF, DDoS Attack
6) Practical on Network devices setup such as firewalls, routers, hub and switch, secure communication on internet, Bluetooth, Hotspot and Infrared.
7) Practical onSecure personal device such as cell phone unlock, recover from hacking, anit-hacking, hack protection etc.
8) Practical on personal device hardening.
9) Practical on taking precautions while using social media.