ethical hacking principles, including reconnaissance, scanning, and password cracking techniques. Students will learn to identify and address vulnerabilities in web applications and wireless networks, using practical tools and methodologies to enhance their ability to secure systems and applications.

S. NO	Course Outcomes (CO)
CO1	Understand Security and Ethical Hacking: Grasp fundamental security principles, ethical hacking concepts, and key terminologies.
CO2	Conduct Reconnaissance and Scanning: Perform footprinting and port scanning using relevant tools.

CO3	Analyze Cracking and Sniffing Techniques: Understand password cracking methods and sniffing techniques.
CO4	Secure Web Applications and Wireless Networks: Identify vulnerabilities in web applications and secure wireless networks.

S. NO	Contents	Contact H...
UNIT 1	Understanding the importance of security, Concept of ethical hacking and essential TerminologiesThreat, Attack, Vulnerabilities, Target of Evaluation, Exploit. Phases involved in hacking.	**9**
UNIT 2	Footprinting - Introduction to foot printing, Understanding the information gathering methodology of the hackers,Tools used for the reconnaissance phase.Port Scanning - Introduction, using port scanning tools, ping sweeps, Scripting Enumeration-Introduction, Enumerating windows OS & Linux OS.	**11**
UNIT 3	Aspect of remote password guessing, Role of eavesdropping ,Various methods of password cracking, Keystroke Loggers, Understanding Sniffers ,Comprehending Active and Passive Sniffing, ARP Spoofing and Redirection, DNS and IP Sniffing, HTTPS Sniffing.	**9**
UNIT 4	Web application vulnerabilities, application coding errors, SQL injection into Back-end Databases, cross-site scripting, cross-site request forging, authentication bypass, web services and related flaws, protective http headers Understanding Session Hijacking, Phases involved in Session Hijacking,Types of Session Hijacking, Session Hijacking Tools.	**9**
UNIT 5	Introduction to 802.11, Role of WEP, Cracking WEP Keys, Sniffing Traffic, Wireless DOS attacks, WLANScanners, WLANSniffers, Hacking Tools, Securing Wireless Networks.	**4**
	TOTAL	**42**

REFERENCES

S.No.	Name of Books/Authors/Publishers	Year of Publication /
1	"Certified Ethical Hacker", Kimberly Graves, Wiley India Pvt Ltd ISBN 978-0-470-52520-3	2019
2	"Network Seuciryt and Ethical Hacking", Rajat Khare, Luniver Press ISBN:978-1-905986-00-2	2006
3	Thomas Mathew, "Ethical Hacking", OSB publishers ISBN: 0972936211	2003
4	Ramachandran V, BackTrack 5 Wireless Penetration Testing Beginner's Guide (3rd ed.). Packt Publishing, ISBN: 9781849515580	2011

B.Tech. Information Technology				
Course code: Course Title	**Course Structure**			**Pre-Requisite**
	L	**T**	**P**	Linear algebra, probability,