

BCSE319P	PENETRATION TESTING AND VULNERABILITY ANALYSIS LAB		L	T	P	C
			0	0	2	1
<b>Pre-requisite</b>	NIL		<b>Syllabus version</b>			
			1.0			
<b>Course Objectives</b>						
<p>1. To understand the system security-related incidents and insight on potential defenses, countermeasures against common vulnerabilities.</p> <p>2. To provide the knowledge of installation, configuration, and troubleshooting of information security devices.</p> <p>3. To make students familiarize themselves with the tools and common processes in information security audits and analysis of compromised systems.</p>						
<b>Course Outcome</b>						
After completion of this course, the student shall be able to:						
<p>1. Learn the knowledge into practice for testing the vulnerabilities and identifying threats.</p> <p>2. Determine the security threats and vulnerabilities in computer networks using penetration testing techniques.</p>						
<b>Indicative Experiments</b>						
1.	Perform a track of information about Domain Registrars and DNS by lookup technologies					
2.	Perform various Port Scanning methodologies to identify the misconfiguration issues about the infrastructure.					
3.	Analyze the traffic routing and information carried among the network through Wireshark					
4.	Exploit threats and mitigation strategies for, ARP Spoofing, IP Spoofing,					
5.	Demonstrate various approaches followed on password breaking methodology.					
6.	Perform and analyze the wireless network to identify their weakness around access points with defensive mechanisms around it.					
7.	Apply various payloads to gain various categories of backdoor access of a machine using Metasploit and Meterpreter.					
<b>Total Laboratory Hours</b>						<b>30 hours</b>
<b>Text Books</b>						
1.	Najera-Gutierrez G, Ansari JA. Web Penetration Testing with Kali Linux: Explore the methods and tools of ethical hacking with Kali Linux., 2018, 3rd Edition, Packt Publishing Ltd, United Kingdom.					
2.	Hadnagy C. Social engineering: The science of human hacking, 2018, 2nd Edition, John Wiley & Sons, United States.					
<b>Reference Books</b>						
1.	Weidman G. Penetration testing: a hands-on introduction to hacking, 2014, 1st Edition, No Starch Press, United States					
Mode of assessment: Continuous assessment / FAT						
Recommended by Board of Studies			04-03-2022			
Approved by Academic Council			No.65	Date	17-03-2022	