

COURSE CODE	COURSE TITLE	L	T	P	C
1152CS104	ETHICAL HACKING	3	0	0	3

Course Category: Program Elective

A. Preamble:

The objective of this course is to familiarize students with hacking techniques, methodologies, tools, tricks, and security measures to secure an organization's IT systems.

B. Pre-requisites:

Sl. No	Course Code	Course Name
1	1151CS111	Computer Networks

C. Related Courses:

Sl. No	Course Code	Course Name
1	1156CS601	Minor Project
2	1156CS701	Major Project

D. Course Educational Objectives:

Students undergoing this course are exposed to

- Ethical Hacking ethically penetrates into network systems using various tools to test the strength of a network.
- Ethical Hacking course shows how to test, scan, hack and secure networks and systems.
- Get in-depth theoretical knowledge and rich practical experience in hacking test networks.

E. Course Outcomes :

Upon the successful completion of the course, learners will be able to

CO Nos.	Course Outcomes	Level of learning domain (Based on revised Bloom's taxonomy)
CO1	Understanding the basics of networking with the introduction on the system attacks	K2
CO2	Describes attacks in terms of industry, society and information systems	K2
CO3	Describes various types of securities and vulnerabilities	K2
CO4	Demonstration of the ethical hacking tools	K3
CO5	Summarizing the legal and professional responsibilities of ethical hacking	K2

F. Correlation of COs with POs:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	L	L			L			H					L		L
CO2	L	L			M			H		L			L	L	L
CO3	L	M			L			H		L	L		L	L	L
CO4		M			H			H	M	L	L			M	M
CO5		M			L			H							H

H- High; M-Medium; L-Low

G. Course Content :

- UNIT –I** **9**
 Ethical Hacking: Introduction, Networking & Basics, Foot Printing, Google Hacking, Scanning, Windows Hacking, Linux Hacking, Trojans & Backdoors, Virus & Worms, Proxy & Packet Filtering, Denial of Service, Sniffer, Social Engineering,
- UNIT –II** **9**
 Introduction to Computer Systems and Networks , information systems and networks (including wireless networks) and their role in industry business and society, System and Network Vulnerability and Threats to Security , various types of attack and the various types of attackers in the context of the vulnerabilities associated with computer and information systems and networks
- UNIT -III** **9**
 Physical Security, Steganography, Cryptography, Wireless Hacking, Firewall & Honeypots, IDS & IPS, Vulnerability, Penetration Testing, Session Hijacking, Hacking Web Servers, SQL Injection, Cross Site Scripting, Exploit Writing, Buffer Overflow, Reverse Engineering, Email Hacking, Incident Handling & Response, Bluetooth Hacking, Mobile Phone Hacking
- UNIT –IV** **9**
 An introduction to basic ethical hacking tools and usage of these tools in a professional environment in a form of project
- UNIT –V** **9**
 An introduction to the particular legal, professional and ethical issues likely to face the domain of ethical hacking. Ethical responsibilities, professional integrity and making appropriate use of the tools and techniques associated with ethical hacking.

TOTAL: 45 Hours

H. Learning Resources

i. Text Books:

1. Hands-On Ethical Hacking and Network Defense – By Michael T. Simpson, Kent Backman, James Corley
2. Official Certified Ethical Hacker Review Guide – By Steven DeFino, Barry Kaufman, Nick Valenteen.

ii. Reference Books:

1. The Basics of Hacking and Penetration Testing: Ethical Hacking and Penetration Testing Made Easy (Syngress Basics Series) [Paperback]
2. Hands-On Ethical Hacking and Network Defense [Print Replica] [Kindle Edition]