

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT108	Ethical Hacking	3	0	0	3

Course Category:

~~Foundation (0) / Program Core (1) / Program Elective (2) / Allied Elective (3) / University Elective (4) / Value Education Elective (5) / Independent Learning (6) / Industry – Higher Learning Institute Interaction (7)~~

a.Preamble:

This Ethical hacking course is used to investigate the importance of ethical hacking and its implementation in organizations.

b. Pre-requisites:

Sl. No	Course Code	Course Name
1		Cryptography and network security

c. Related Courses:

Sl. No	Course Code	Course Name
1		Modern Cryptography
2		Web Technology
3		Project Work

d. Course Educational Objectives:

Students undergoing this course are expected to

- To covers the importance of information security.
- To understand different scanning and enumeration methodologies and tools.
- To analyze various hacking techniques and attacks.
- To provide importance of programming languages for security professionals

e.Course Outcomes:

CONos	Course Outcomes	Level of learning domain(Based on revised Bloom's taxonomy)
CO1	nd hacking attacks and protect data assets	K2
CO2	To get knowledge on various scanning methodologies and Enumeration Techniques	K2
CO3	Defend a computer against a variety of security attacks using various tools	K2
CO4	Practice and use safe techniques on the World Wide Web	K2
CO5	To get familiarized with the different phases in ration testing.	K3

f. Course Content:

UNIT I INTRODUCTION TO HACKING 9

Introduction to Hacking – Importance of Security – Elements of Security – Phases of an Attack – Types of Hacker Attacks – Hacktivism – Vulnerability Research – Introduction to Foot printing – Information Gathering Methodology – Foot printing Tools – WHOIS Tools – DNS Information Tools – Locating the Network Range – Meta Search Engines.

UNIT II SCANNING AND ENUMERATION 9

Introduction to Scanning – Objectives – Scanning Methodology – Tools – Introduction to Enumeration – Enumeration Techniques – Enumeration Procedure – Tools.

UNIT III SYSTEM HACKING 9

Introduction – Cracking Passwords – Password Cracking Websites – Password Guessing – Password Cracking Tools – Password Cracking Counter measures – Escalating Privileges – Executing Applications – Key loggers and Spyware.

UNIT IV PROGRAMMING FOR SECURITY PROFESSIONALS 9

Programming Fundamentals – C language – HTML – Perl – Windows OS Vulnerabilities – Tools for Identifying Vulnerabilities – Countermeasures – Linux OS Vulnerabilities – Tools for Identifying Vulnerabilities – Countermeasures.

UNIT V PENETRATION TESTING 9

Introduction – Security Assessments – Types of Penetration Testing- Phases of Penetration Testing – Tools – Choosing Different Types of Pen-Test Tools – Penetration Testing Tools

TOTAL : 45 PERIODS

h.Learning Resources

i.Text Books:

1. Ec-Council, “Ethical Hacking and Countermeasures: Attack Phases”, Delmar Cengage Learning, 2009.
2. Michael T. Simpson, Kent Backman, James E. Corley, “Hands-On Ethical Hacking and Network Defense”, Cengage Learning, 2012.

ii.References:

1. Patrick Engebretson, “The Basics of Hacking and Penetration Testing – Ethical Hacking and Penetration Testing Made Easy”, Syngress Media, Second Revised Edition, 2013.
2. Jon Erickson, “Hacking: The Art of Exploitation”, No Starch Press, Second Edition, 2008.