

## CYBER SECURITY AND ETHICAL HACKING

(Program Elective – VI)

<b>Course Code</b>	19IT4801A	<b>Year</b>	IV	<b>Semester</b>	II
<b>Course Category</b>	PE	<b>Branch</b>	IT	<b>Course Type</b>	Theory
<b>Credits</b>	3	<b>L-T-P</b>	3-0-0	<b>Prerequisites</b>	CNS
<b>Continuous Internal Evaluation :</b>	30	<b>Semester End Evaluation:</b>	70	<b>Total Marks:</b>	100

### Course Outcomes

<b>Upon Successful completion of course, the student will be able to</b>		
CO1	Understand the basics of cyber security and Ethical Hacking	L2
CO2	Illustrate diverse cyber offences	L3
CO3	Identify various methods and tools used in Cyber Crime.	L2
CO4	Identify different issues and techniques in hacking	L3

### Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>CO1</b>	3												2	2
<b>CO2</b>	3												2	2
<b>CO3</b>		3											2	2
<b>CO4</b>	3					3		3					2	2

Syllabus		
Unit No	Contents	Mapped CO
I	<b>Introduction to Cybercrime:</b> Introduction, Cybercrime, and Information Security, Who are Cybercriminals, Classifications of Cybercrimes, The legal Perspectives and Indian Perspective, Cybercrime and the Indian ITA 2000, A Global Perspective on Cybercrimes.	CO1
II	<b>Cyber Offenses:</b> How Criminals Plan Them: Introduction, How Criminals plan the Attacks, Social Engineering, Cyber stalking, Cyber cafe and Cybercrimes, Botnets (The Fuel for Cybercrime), Attack Vector, and Cloud Computing.	CO1, CO2
III	<b>Tools and Methods Used in Cybercrime:</b> Introduction, Proxy Servers and Anonymizers, Phishing, Password Cracking, Key loggers and Spywares, Virus and Worms, Trojan Horse and Backdoors, Steganography, DoS and DDoS attacks, SQL Injection, Buffer Overflow	CO1, CO3
IV	<b>Introduction to Ethical Hacking, Ethics, and Legality:</b> Defining Ethical Hacking, How to Be Ethical, Keeping It Legal, Reconnaissance, Information-Gathering Methodology	CO1, CO4
V	<b>System Hacking:</b> The Simplest Way to Get a Password, Types of Passwords, Cracking a Password, Understanding Key loggers and Other Spyware Technologies Trojans and Backdoors: Overt and Covert Channels , Types of Trojans, Viruses and Worms : Types of Viruses , Virus Detection Methods	CO1, CO4

Learning Resources
<b>Text Books</b>
<ol style="list-style-type: none"> <li>1. Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Prespectives, Nina God bole and Sunil Belapure, First edition, 2011, Wiley INDIA</li> <li>2. Certified ethical hacker study guide by Kimberly Graves, First Edition</li> </ol>
<b>References</b>
<ol style="list-style-type: none"> <li>1. James Graham, Richard Howard and Ryan Otson, Cyber Security Essentials, First edition, 2011, CRC Press.</li> <li>2. Chwan-Hwa(John) Wu, J. David Irwin, Introduction to Cyber Security, First edition, 2013, CRC Press T&amp;F Group.</li> </ol>
<b>E- Resources and other Digital Material</b>
<ol style="list-style-type: none"> <li>1. <a href="https://onlinecourses.nptel.ac.in/noc22_cs13/preview">https://onlinecourses.nptel.ac.in/noc22_cs13/preview</a></li> <li>2. <a href="http://eprints.binadarma.ac.id/1000/1/KEAMANAN%20SISTEM%20INFORMASI%20MATERI%201.pdf">http://eprints.binadarma.ac.id/1000/1/KEAMANAN%20SISTEM%20INFORMASI%20MATERI%201.pdf</a></li> </ol>