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| BCY233T04 | ETHICAL HACKING | L | T | P | C |
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(For Students admitted from 2024 onwards)

Common for B.Sc. (CS) / BCA/B.Sc. (Data Science)/B.Sc. (Cyber security)

COURSE OBJECTIVES:

- To know the theory and practices of finding the vulnerabilities.
- To find the different attacks and then defining the appropriate security policy.
- To take action to detect or prevent the attacks and thus reduce the damages.
- To understand the concept of Web Server Hacking.
- To understand the concept of Firewalls

COURSE OUTCOMES:

- To describe the basics of the ethical hacking.
- Ability to learn technical foundations of hacking.
- Able to perform the foot printing and scanning.
- Demonstrate the techniques for system hacking.
- Characterize the malware and their attacks.

SYLLABUS

UNIT – I INTRODUCTION TO ETHICAL HACKING

Security Fundamental - Security Testing - Hacker and Cracker – Descriptions - Test Plans-keeping it legal - Ethical and Legality- Process - The Ethical Hacker's Process.

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UNIT – II FOOTPRINTING AND SCANNING

Information Gathering - Determining the Network Range - Finding Open Ports and Access Points - OS Fingerprinting Services - Mapping the Network Attack Surface.

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UNIT – III MALWARE THREATS AND SESSION HIJACKING

Viruses and Worms- Trojans - Covert Communication - Keystroke Logging and Spyware – Malware Counter Measures- Sniffers - Session Hijacking - Denial of Service.

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UNIT – IV WEB SERVER HACKING AND ATTACKS

Web Server Hacking - Web Application Hacking - Database Hacking - Wireless Technologies – Mobile Security and Attacks: Wireless Technologies – Wireless LANs.

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UNIT – V CASE STUDY

Intrusion Detection Systems - Firewalls - Honeypots - Physical Security - Social Engineering – Case Studies: Intrusion detection Real Secure Tripwire Dragon Snort.

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TOTAL: 60

TEXT BOOKS:

1. Michael Gregg, "Certified Ethical Hacker", Pearson IT Certification, 3rd Edition, 2019.
2. Roger Grimes, "Hacking the Hacker", Wiley, 1st Edition, 2017

REFERENCES:

1. Ankit Fadia, "The Unofficial Guide to Ethical Hacking", Laxmi Publications, 2nd Edition, 2006.
2. Randy Weaver, Dawn Weaver, Dean Farwood, "Guide to Network Defense and Countermeasures", Cengage Learning, Third edition, 2014.