SYLLABI

For

Value Added Course

Certificate Course in Virtuous

Security

Offered by

Department of Information Communication and Technology

TECNIA INSTITUTE OF ADVANCED STUDIES

GRADE 'A' INSTITUTE

3 PSP, Institutional Area, Sector – 14, Rohini, Delhi - 110085

Syllabus

For

Value Added Course

Course Code: BCA -181

Course Name: Certificate Course in Virtuous Security

LEARNING OBJECTIVES:

This course will provide the learners the following: -

- To enable students, develop IT skills that are a pre-requisite in today's work environment.
- To equip them with basic computing skills that will enhance their employability in general.
- To enable the student to analyze and present information in a meaningful manner.

PRE-REQUISITES: None

COURSE OUTCOMES:

After completion of this course, the learners will be able to:-

- Programming & working with data.
- Conduct a wide range of statistical test.
- Understand machine learning algorithm.

Unit 1   **No. Of Hours: 7**

Introduction To Virtuous Security, Overview Of The Course , Importance Of Ethical Considerations In Cybersecurity , Introduction To Ethical Frameworks , Ethical Theories And Principles , Utilitarianism Deontology , Virtue Ethics , Ethical Principles In Cybersecurity , Methodologies Of Ethical Hacking , Legal Considerations.

Unit 2   **No. Of Hours: 7**

Legal And Regulatory Frameworks , Overview Of Relevant Laws And Regulations , GDPR, CCPA, HIPAA, Etc. , Ethical Implications Of Compliance , Ethical Hacking And Penetration Testing , Understanding Ethical Hacking , Rules Of Engagement , Responsible Disclosure , Networking Fundamentals , Information Gathering And Foot-Printing

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Unit 3   **No. Of Hours: 8**

Scanning And Enumeration , Network Infrastructure , Vulnerability Assessments , System Hacking , Privacy And Data Protection , Privacy Rights And Principles , Data Protection Laws , Ethical Data Handling Practices , Cybersecurity In Business Ethics , Ethical Considerations In Organizational Cybersecurity , Ethical Decision-Making In Corporate Environments ,Stakeholder Management And Ethical Responsibilities.

Unit 4   **No. Of Hours: 8**

Scanning and Enumeration , System Hacking , Cryptography , Social Engineering , Social Engineering and Manipulation , Psychological aspects of social engineering , Ethical boundaries in social engineering testing , Mitigating social engineering attacks ethically , Cybersecurity and Human Rights Right to privacy , Freedom of expression , Ethical implications of surveillance , Cybersecurity Incident Response , Ethical considerations in incident response , Balancing transparency and security , Post-incident ethical analysis

TEXT BOOKS:

1. CEH Certified Ethical Hacker All-in-One Exam Guide" by Matt Walker, 2011

2. Gray Hat Hacking: The Ethical Hacker's Handbook" by Allen Harper, Daniel Regalado, Ryan Linn, Stephen Sims, Branko Spasojevic, Linda Martinez, and Michael Baucom, 2009

3. Penetration Testing: A Hands-On Introduction to Hacking" by Georgia Weidman, 2010

REFERENCE BOOKS:

1. The Web Application Hacker's Handbook: Finding and Exploiting Security Flaws" by Dafydd Stuttard and Marcus Pinto, 2001

2. Metasploit: The Penetration Tester's Guide" by David Kennedy, Jim O'Gorman, Devon Kearns, and Mati Aharoni, 2004

Evaluation Pattern: On the basis of practical exam followed by viva.

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