Training Objectives: -

There is a huge demand of trained manpower in Information Security areas to design countermeasures against various types of attacks. In this course participants would learn the anatomy of hack attacks and designing of countermeasures against such type of attacks. It would be achieved through scenario based virtual training environment **[VTE]** (Developed by NIELIT GORAKHPUR CENTRE under DIT funded project) to teach the Information Security concepts to participants by following a practical approach.

    This is an intensive, practical "hands-on" training where participants would gain the skills in various area of information security such as Information gathering, ARP cache poisoning and MITM attack, Brute force attack, Denial of Service (Dos) attack, IP Spoofing, rootkits, SQL Injection, Code Injection, E-mail spoofing & Phishing, E-mail security using PGP, configuring snort IDS, IPSec, IP tables, Hardening windows & Linux and finally evaluating Security.

VTE combines various unique capabilities:

- Self paced learning
- Scenario based Lab
- Self assessment system
- Accessible from anywhere & anytime
- Hands-on lab environments
- Chat system for remote assistance

Duration	4 Weeks
Starting Date	12 January 2015
Seats	30
FEES	RS. 6,500=00/- (S.Tax Included)
ELIGIBILITY	B.TECH. (CS/IT/EC) or MCA/M.Sc. (IT/CS/ Electronics), BCA /PGDCA, Diploma in Computer /Electronics Stream, B.Sc. or B.A, A/B/C Level, Working Professional. Basic knowledge of computing is desirable

How to Apply:

For Admission, submit completely filled in application form along with course fee either in Cash or Demand Draft in favor of "**NIELIT, Gorakhpur**". The application form may be downloaded from our website or collected from reception.

ACCOMMODATION:

Hostel accommodation is available for Male candidates only.

Training Highlights:

- Well Managed Course pattern
- Daily Handouts & Lab Exercise
- Industry Compliant Syllabus
- Use of Latest Tools & Technology
- LAB Assistance

Course Contents
Hands on Practical will cover the following:

Group A (Information Gathering & Countermeasures)

- **Information Gathering & Countermeasures**

  - ❖ To Understand Information Gathering, Network Discovery & Scanning Target Enumeration, Vulnerability Assessment
  - ❖ Hands-on lab for Network Discovery & Scanning, Target Enumeration, Vulnerability Assessment & Countermeasures

Group B (Anatomy of Hacking & Countermeasures)

- **Sniffing & Countermeasures**

  - ❖ To Understand Sniffing, Man in the Middle Attack (MITM) and ARP Cache Poisoning
  - ❖ Hands-on lab for ARP Cache Poisoning & Sniffing

- **Brute Force Attack & Countermeasures**

  - ❖ To Understand Hash Function, Password Hashes, Brute Force Attack and Types of Password Attacks
  - ❖ Hands-on lab for Brute Force Attack

- **IP Spoofing with DoS & Countermeasures**

  - ❖ To Understand Spoofing, IP Spoofing and Denial of Service (DoS)
  - ❖ Hands-on lab for IP Spoofing and DoS

- **Trojan, Backdoor & Virus& Countermeasures**

  - ❖ To Understand Trojan, Backdoor and Viruses
  - ❖ Hands-on lab of Trojan Attack for Windows Operating System

- **Bypassing Proxy& Countermeasures**

  - ❖ To Understand Spoofing Proxy Servers, Types of Proxy Servers and Web/Content Filtering
  - ❖ Hands-on lab to Bypassing Proxy & Countermeasures

- **SQL Injection Attack & Countermeasures**

  - ❖ To Understand SQL Injection, Plain SQL Injection, Blind SQL, Injection Preventive Measures and Data Validation
  - ❖ Hands-on lab for SQL Injection Attacks & Countermeasures

- **Code Injection & Countermeasures**

  - ❖ To Understand Code Injection, Types of Code Injection and DLL
  - ❖ Hands-on lab for Code Injection: Static Code Injection

- **E-mail Spoofing, Phishing & Countermeasures**

  - ❖ To Understand E-mail Spoofing, Phishing and Phishing Techniques
  - ❖ Hands-on lab for E-mail Spoofing, Phishing & Countermeasures

- **Hacking Wireless Network &Countermeasure**
  - ❖ To Understand Wireless Network Attacks, Scanning Wireless Network and Cracking WEP/WPA Key of Wireless Network
  - ❖ Hands-on lab for Hacking Wireless Network & Countermeasures

Group C (Hardening, Perimeter Security & Evaluating Security)

- **E-mail Security**
  - ❖ To Understand Common E-mail Protocols, E-mail Encryption and Digital Signature
  - ❖ Hands-on lab for E-mail Security
- **Network Traffic Analysis**
  - ❖ To Understand Network Traffic Analysis
  - ❖ Hands-on lab for Network Traffic Analysis
- **Network Traffic Encryption**
  - ❖ To Understand IP Security, Protocols used in IPSec, Security Architecture of IPSec and Modes of IPSec
  - ❖ Hands-on lab for IP Security
- **Installing & Configuring Intrusion Detection System**
  - ❖ To Understand Intrusion Detection System, Various Types of IDS and Components used in Snort Implementation
  - ❖ Hands-on lab for Installing & Configuring IDS
- **Configuring Host Based Firewall**
  - ❖ To Understand Basic concepts of Firewall, Basic techniques for Configuring Firewall
  - ❖ Hands-on lab to Configuring Host Based Firewall (Windows) and Firewall (Linux)
- **Host System Hardening (Windows)**

- ❖ To Understand Vulnerability Assessment and OS Hardening
- ❖ Hands-on lab for Windows Server 2008 R2 Hardening
- **Host System Hardening (Linux)**
  - ❖ To Understand OS Hardening
  - ❖ Hands-on lab for CentOS 6 Hardening
- **Evaluating Security**
  - ❖ To Understand Security Evaluation, Penetration Testing and Benefits of Penetration Testing
  - ❖ Hands-on lab for Windows Server 2008 R2 Penetration Testing

---

CONTACT FOR INFORMATION:

Abhinav Mishra
Scientist C
7752997204
abhinav@nielit.gov.in

ADDRESS FOR CORRESPONDENCE:

IT DIVISION
National Institute of Electronics and Information Technology (NIELIT) Gorakhpur
M. M. M. Engineering College campus, Gorakhpur (UP) – 273010.
Phone: 0551-2273874
Fax: 0551-2273873
http://gorakhpur.nielit.gov.in

INFORMATION SECURITY USING VIRTUAL TRAINING ENVIRONMENT (VTE) -A PRACTICAL APPROACH TO LEARN IT SECURITY SKILLS

ORGANIZED BY

राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, गोरखपुर
National Institute of Electronics and Information Technology (NIELIT) Gorakhpur
An Autonomous Scientific Society of Ministry of Communication & Information Technology,
Department of Electronics & Information Technology (DeitY), Govt. of India
M. M. M. University of Technology, Gorakhpur
U.P.– 273010
Web : http://gorakhpur.nielit.gov.in