A-Z Defense in Comp Security - For Beginners Syllabus

Module 01: Foundations of Security	4 Hours - 14 Topics

- Essential Terminologies (Day 1)
- Computer Security (Day 1)
- Why Security? (Day 1)
- Potential Losses Due to Security Attacks (Day 1)
- Elements of Security (Day 1)
- The Security, Functionality, and Ease of Use Triangle (Day 1)
- Fundamental Concepts of Security (Day 2)
- Layers of Security (Day 2)
- Security Risk to Home Users (Day 2)
- What to Secure? (Day 2)
- What Makes a Home Computer Vulnerable? (Day 2)
- What makes a System Secure? (Day 2)
- Benefits of Computer Security Awareness (Day 2)
- Basic Computer Security Checklist (Day 2)

Module 02: Securing Operating Systems	4 Hours - 19 Topics

- System Security (Day 3)
- Threats to System Security (Day 3)
  - Password Cracking
- Guidelines for Windows OS Security (Day 3)
  - Lock the System When Not in Use
  - Create a Strong User Password
  - Change Windows User Password: Windows 7
  - Disable the Guest Account: Windows 7
  - Lock Out Unwanted Guests in Windows 7
  - Rename the Administrator Account in Windows 7
  - Disable Start up Menu in Windows 7
  - Windows Updates in Windows 7
  - Pointers for Updates
  - Apply Software Security Patches
  - Configuring Windows Firewall in Windows 7
  - Adding New Programs in Windows Firewall in Windows 7
  - Removing/Disabling Programs Rules from the Windows Firewall in Windows 7
  - Creating a New Windows Firewall Rule in Windows 7
  - Two-Way Firewall Protection in Windows
  - Always Use NTFS
- Windows Encrypting File System (EFS) (Day 3)

- o **How to Decrypt a File Using EFS in Windows?**
- **Using Windows Defender (Day 3)**
- **Enable BitLocker in Windows 7 (Day 3)**
- **Launching Event Viewer in Windows 7 (Day 4)**
  - o **Event Viewer: Events and How to Read Logs on the System**
- **Disabling Unnecessary Services in Windows 7 (Day 4)**
- **Killing Unwanted Processes (Day 4)**
- **Finding Open Ports Using Netstat Tool (Day 4)**
- **Configuring Audit Policy (Day 4)**
- **How to Hide Files and Folders? (Day 4)**
- **Disable Simple File Sharing in Windows (Day 4)**
- **Raise the UAC Slider Bar in Windows 7 (Day 4)**
- **Windows Security Tools (Day 4)**
  - o **Windows Security Tools: Microsoft Security Essentials**
  - o **Windows Security Tools: KeePass Password Safe Portable**
  - o **Windows Security Tools: Registry Mechanic**
- **Guidelines for Securing Mac OS X (Day 4)**
  - o **Step 1: Enabling and Locking Down the Login Window**
  - o **Step 2: Configuring Accounts Preferences**
  - o **Step 3: Guidelines for Creating Accounts**
  - o **Step 4: Securing the Guest Account**
  - o **Step 5: Controlling Local Accounts with Parental Controls**
  - o **Step 6: Use Keychain Settings**
  - o **Step 7: Use Apple Software Update**
  - o **Step 8: Securing Date & Time Preferences**
  - o **Step 9: Securing Network Preferences**
  - o **Step 10: Enable Screen Saver Password**
  - o **Step 11: Set Up FileVault to Keep Home Folder Secure**
  - o **Step 12: Firewall Security**
- **Operating Systems Security Checklist (Day 4)**
- **Security Checklist for Windows 7 (Day 4)**
- **MAC OS Security Checklist (Day 4)**

Module 03: Protecting System Using Antiviruses	2 Hours - 10 Topics

- **Introduction to Antivirus Software (Day 5)**
- **Need for Antivirus Program (Day 5)**
- **How Does Antivirus Software Work? (Day 5)**
- **Antivirus Software 2011 (Day 5)**
- **Choosing the Best Antivirus Software (Day 5)**
- **Steps to Install Antivirus on Your Computer (Day 5)**
- **How to Test If Antivirus Is Working (Day 5)**
- **Configuring McAfee Antivirus (Day 5)**
- **Configuring Kaspersky PURE (Day 5)**
- **Antivirus Security Checklist (Day 5)**

Module 04: Data Encryption — 2 Hours - 10 Topics

- **Common Terminologies (Day 6)**
- **What is Encryption? (Day 6)**
- **Objectives of Encryption (Day 6)**
- **Usage of Encryption (Day 6)**
- **Types of Encryption (Day 6)**
  - o **Symmetric vs. Asymmetric Encryption**
- **Encryption Standards (Day 6)**
- **Digital Certificates (Day 6)**
- **How Digital Certificates Work? (Day 6)**
- **Digital Signature (Day 6)**
- **Cryptography Tools (Day 6)**

Module 05: Data Backup and Disaster Recovery — 4 Hours - 17 Topics

- **Data Backup (Day 7)**
- **Need for Backup (Day 7)**
- **Types of Data Loss (Day 7)**
- **What Files to Backup and How Often? (Day 7)**
- **Online Data Backup (Day 7)**
- **Online Backup Service Providers (Day 7)**
- **Types of Backup**
- **Back Up the Data Using Windows Backup (Day 7)**
  - o **Steps to Backup Data**
  - o **Restoring Data**
- **Securing Backup on Storage Devices with Encryption (Day 7)**
- **Time Machine (Apple Software) (Day 7)**
  - o **Setting Up Time Machine**
  - o **Restoring Files from Time Machine Backups**
- **Data Backup Tools for Windows (Day 8)**
  - o **Acronis True Image Home 2011**
  - o **NovaBACKUP Home Protection**
  - o **Data Backup Tools for Windows**
- **Data Backup Tools for MAC OS X (Day 8)**
  - o **MAC OS X Data Backup Tool: Data Backup**
  - o **MAC OS X Data Backup Tool: SmartBackup**
  - o **Data Backup Tools for MAC OS X**
- **Data Recovery Tools for Windows (Day 8)**
  - o **Windows Data Recovery Tool: Recover My Files**
  - o **Windows Data Recovery Tool: EASEUS Data Recovery Wizard**
  - o **Data Recovery Tools for Windows**
- **MAC OS X Data Recovery Tool (Day 8)**
  - o **Boomerang Data Recovery Software**
  - o **VirtualLab**
  - o **Data Recovery Tools for MAC OS X**
- **Physical Security (Day 8)**

- o **Physical Security Measures: Locks**
- o **Physical Security Measures: Biometrics**
- o **Physical Security Measures: Fire Prevention**
- o **Physical Security Measures: HVAC Considerations**
- o **Securing Laptops from Theft**
- o **Laptop Theft Countermeasures**
- **Data Backup Checklist (Day 8)**
- **Physical Security Checklist (Day 8)**

Module 06: Internet Security	8 Hours - 32 Topics

- **Internet Security (Day 9)**
- **Internet Explorer Security Settings (Day 9)**
  - o **Internet Explorer Security Settings: Internet Zone**
  - o **Internet Explorer Security Settings: ActiveX Controls**
  - o **Internet Explorer Security Settings: Local Intranet Zone**
  - o **Internet Explorer Security Settings: Trusted Sites Zone**
  - o **Internet Explorer Security Settings: Restricted Zone**
- **Understanding Cookies (Day 9)**
- **Internet Explorer Privacy Settings (Day 9)**
  - o **Deleting Browsing History**
  - o **Do Not Allow the Browser to Remember any Password**
- **Securing File Downloads (Day 9)**
- **Mozilla Firefox Security Settings (Day 9)**
- **Mozilla Firefox: Privacy Settings (Day 9)**
- **Securing File Downloads (Day 9)**
- **Installing Plugins (Day 9)**
- **Google Chrome Privacy and Security Settings (Day 10)**
  - o **Google Chrome: Privacy Settings**
  - o **Google Chrome: Security Settings**
- **Apple Safari Security Settings (Day 10)**
- **Testing the Browser for Privacy (Day 10)**
- **Instant Messaging (IMing) (Day 10)**
  - o **Instant Messaging Security Issues**
  - o **Instant Messaging Security Measures**
- **Searching the Web (Day 10)**
- **Online Gaming and MMORPG (Day 10)**
  - o **Online Gaming Risks**
  - o **Insecure or Compromised Game Servers and Game Coding**
  - o **Social Risks**
  - o **Social Engineering**
- **Protection Schemes, Cyber Prostitution, and Virtual Mugging (Day 10)**
- **How the Malicious Users Make Money? (Day 10)**
- **Security Practices Specific to Gaming (Day 10)**
  - o **Recognize Administrator Mode Risks**
  - o **Recognize Risks due to ActiveX and JavaScript**

- - Play the Game, Only at the Game Site
    - Pay Attention to Firewall Management
  - **Child Online Safety (Day 11)**
    - **Risks Involved Online**
      - **Misdirected Searches**
      - **Stealth Sites and Misleading URLs**
      - **Child Pornography, Grooming, and Cyberbullying**
  - **Role of Internet in Child Pornography (Day 11)**
    - **Effects of Pornography on Children**
    - **Risks Involved in Social Networking Websites**
  - **Unsolicited Emails (Day 11)**
  - **Chat Rooms (Day 11)**
  - **Finding if Children are at Risk Online (Day 11)**
  - **Protecting Children from Online Threats (Day 11)**
  - **Encourage Children to Report (Day 11)**
  - **How to Report a Crime? (Day 11)**
  - **Security Software Checklist (Day 11)**
    - **KidZui**
  - **Actions to Take When the Child Becomes an Online Victim (Day 12)**
  - **Internet laws (Day 12)**
  - **Laws Internet users should know (Day 12)**
    - **USA PATRIOT Act**
    - **Children's Online Privacy Protection Act (COPPA)**
    - **The Digital Millennium Copyright Act**
      - **Highlights of DMCA**
    - **CAN-SPAM Act**
    - **Computer Misuse Act 1990**
    - **European Union Data Protection Directive (95/46/EC)**
    - **Data Protection Act 1998**
  - **Internet Security Checklist (Day 12)**
  - **Guidelines for Parents to Protect Children from Online Threats (Day 12)**

Module 07: Securing Network Connections   4 Hours - 12 Topics

- **Home Network (Day 13)**
  - **Network Devices**
  - **Steps for Home Networking**
- **Wireless Networks (Day 13)**
  - **Setting Up a Wireless Network in Windows 7**
    - **Changing Wireless Networking Configuration in Windows 7**
  - **Setting Up a Wireless Network in Mac**
    - **Changing Wireless Networking Configuration in Mac**
- **Common Threats to Wireless Network (Day 13)**
- **Securing Wireless Network (Day 13)**
- **Using the Network with Windows 7 (Day 13)**
  - **Setting Up the PC's Name and Workgroup Name in Windows 7**

- o **Sharing**
- o **Transferring Files**
- o **Simple File Sharing in Windows 7**
- o **Hiding a Shared Disk or Folder**
- o **How to Share Printer in Windows 7?**
- o **Using Printers on Other PC's**
- o **Accessing Files on Other PCs**
- o **Windows Easy Transfer**
- **Using the Network with MAC OS X (Day 13)**
    - o **Setting Up the PC's Name in MAC OS X**
    - o **Setting Up the Workgroup Name in MAC OS X**
    - o **Creating User Accounts and Groups in MAC OS X**
    - o **Sharing Files and Folders in Macintosh OS X**
    - o **Printer Sharing in Macintosh OS X**
    - o **Accessing Other Macs on Your Network**
- **Network Security Threats (Day 14)**
- **Securing Network Connections (Day 14)**
    - o **Use Firewall**
    - o **Use Antivirus Protection**
    - o **Use Strong Passwords, Make Regular Backups, and Know about Encryption**
    - o **Identify a Secure Website**
- **General Security Practices in Home Networking (Day 14)**
- **Network Adapters (Day 14)**
    - o **Checking Network Adapter**
    - o **Network Setup Wizard**
    - o **How to Isolate Networking Problems (Windows 7): Network Adapter?**
    - o **Network Adapter Status**
- **Troubleshooting with Network Adapters (Day 14)**
    - o **Network Adapter is Unplugged**
    - o **Network Adapter Has Limited or No Connectivity**
    - o **Network Adapter is Connected, but User Cannot Reach the Internet**
- **Network Security Checklist (Day 14)**

Module 08: Securing Online Transactions	2 Hours - 12 Topics

- **Online Shopping (Day 15)**
    - o **How Online Shopping Works?**
- **Online Banking (Day 15)**
- **Credit Cards Payments (Day 15)**
- **Types of Credit Card Frauds (Day 15)**
- **Guidelines for Ensuring Credit Card Safety (Day 15)**
- **Securing Online Transactions (Day 15)**
- **Online Payment Services (Day 15)**
    - o **Choosing a Secure Online Payment Service**
- **SSL and the Padlock Symbol (Day 15)**

- o **What Does the SSL Show?**
- **Identifying a Trustworthy Website (Day 15)**
- **Identifying an Untrustworthy Website (Day 15)**
- **McAfee's Site Advisor (Day 15)**
  - o **Rating Icons**
- **Online Transactions Security Checklist (Day 15)**

Module 09: Securing Email Communications	2 Hours - 8 Topics

- **Email Security (Day 16)**
- **Email Security Threats (Day 16)**
  - o **Malicious Email Attachments**
    - ▪ **Email Attachments: Caution**
  - o **Spamming**
    - ▪ **Spamming Countermeasures**
      - ▪ **Anti-Spamming Tool**
    - ▪ **Hoax/Chain Emails**
    - ▪ **Scam Emails**
      - ▪ **Nigerian Scam**
- **Email Security Procedures (Day 16)**
  - o **Creating Strong Passwords**
  - o **Alternate Email Address**
  - o **Keep Me Signed In/Remember Me**
  - o **Using HTTPS**
  - o **Check for Last Account Activity**
  - o **Scanning Email Attachments**
  - o **Turn Off Preview Feature**
  - o **Email Filtering: Avoiding Unwanted Emails**
  - o **Digitally Sign Your Emails**
    - ▪ **How to Obtain Digital Certificates?**
    - ▪ **Installing Digital Certificate**
    - ▪ **Signing your Emails**
  - o **Microsoft Outlook Download Settings**
- **Online Email Encryption Service (Day 16)**
- **Email Security Tools (Day 16)**
- **Email Communication Checklist (Day 16)**
- **Email Security Checklist (Day 16)**
- **Security Checklist for Checking Emails on Mobile (Day 16)**

Module 10: Social Engineering and Identity Theft	2 Hours - 9 Topics

- **What Is Identity Theft? (Day 17)**
  - o **Personal Information that Can be Stolen**
  - o **How Do Attackers Steal Identity?**
  - o **What Do Attackers Do with Stolen Identity?**
  - o **Identity Theft Example**
- **Social Engineering (Day 17)**

- o **Social Engineering Examples**
- o **Human-Based Social Engineering**
- o **Computer-Based Social Engineering**
  - ▪ **Computer-Based Social Engineering: Phishing**
  - ▪ **Phony Security Alerts**
- o **Computer-based Social Engineering Through Social Networking Websites**
- **How to Learn if You Are a Victim of Identity Theft (Day 17)**
- **What to Do if Identity Is Stolen (Day 17)**
- **Reporting Identity Theft (Day 17)**
  - o **Federal Trade Commission**
  - o **econsumer.gov**
  - o **Internet Crime Complaint Center**
- **Prosecuting Identity Theft (Day 17)**
- **Protecting from Identity Theft (Day 17)**
  - o **IP Address Hiding Tools**
- **Identity Theft Protection Checklist (Day 17)**
- **Computer Based Identity Theft Protection Checklist (Day 17)**

Module 11: Security on Social Networking Sites   2 Hours - 9 Topics

- **Social Networking Sites (Day 18)**
- **What Is a Profile? (Day 18)**
- **Top Social Networking Sites (Day 18)**
- **Security Risks Involved in Social Networking Sites (Day 18)**
  - o **Cyberbullying**
  - o **Identity Theft**
  - o **Phishing Scams**
  - o **Malware Attacks**
  - o **Site Flaws**
- **Social Networking Threats to Minors (Day 18)**
- **Facebook Privacy Settings (Day 18)**
  - o **Profile Settings**
  - o **Privacy Settings for Applications**
  - o **Settings to Block Users**
  - o **Recommended Actions for Facebook Search Settings**
  - o **Facebook: Security Tips**
- **Staying Safe on MySpace (Day 18)**
- **Social Networking Security Checklist (Day 18)**
- **Social Networking Security Checklist for Parents and Teachers (Day 18)**

Module 12: Information Security and Legal Compliance   2 Hours - 3 Topics

- **HIPPA (Day 19)**
  - o **HIPPA Checklist**
- **FERPA (Day 19)**
  - o **FERPA Checklist**

- **PCI DSS (Day 19)**
  - **PCI DSS Checklist**

Module 13: Securing Mobile Devices	2 Hours - 11 Topics

- **Mobile Device Security (Day 20)**
- **Mobile Phone Services (Day 20)**
- **IMEI Number (Day 20)**
- **Mobile Device Security Risks (Day 20)**
  - **Mobile Malware**
  - **Mobile Application Vulnerabilities**
- **Threats to Bluetooth Devices (Day 20)**
- **Mobile Security Procedures (Day 20)**
  - **Patching Mobile Platforms and Applications**
  - **Avoid Mobile Device Theft**
  - **What to DO if Your Mobile is Lost or Stolen**
  - **Use Power-On Authentication**
  - **Regularly Back Up Important Data**
  - **Use Encryption to Secure Data in Mobile Device**
  - **Enable the Auto-Lock Feature**
  - **Install Only Signed Applications**
  - **Install Mobile Phone Anti-Virus**
  - **Mobile Phone Anti-Virus Tools**
  - **Secure Bluetooth Connectivity**
- **Securing iPhone and iPad (Day 20)**
  - **Enable Passcode Protection**
  - **Enable SIM PIN Protection**
  - **Enable Auto-Lock and Re-map Button**
  - **iPad Security**
- **Securing Blackberry and Windows Phone 7 Mobiles (Day 20)**
  - **BlackBerry: Setting Device Password**
  - **BlackBerry: Changing the Device Password**
  - **BlackBerry: Lock Your Device**
  - **BlackBerry: Device Password**
  - **BlackBerry Password Keeper**
  - **Encrypting Data on Your BlackBerry Device**
  - **Windows Phone 7 Mobiles: Use of PIN to Lock SIM Card**
  - **Windows Phone 7 Mobiles: Changing the Password of the Phone**
- **Mobile Security Tools (Day 20)**
- **Bluetooth Security Checklist (Day 20)**
- **Mobile Phone Security Checklist (Day 20)**