|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Lesson Plan** |  |  |
|  |  |  |  |  |
| Name Of Faculty | | **: Vikram Sanwal** |  |  |
| Discipline | | **: Computer Engg.** |  |  |
| Semester | | **: VIth** |  |  |
| Subject | | **:Network Security** |  |  |
| Lesson Plan Duration: 15 Weeks (From Jan 2020 to April 2020) | | |  |  |
| Work Load (Lecture / Practical) per week (In hours): Lecture-3, Practical-3) | | | |  |
| Week | Theory | | Practical | |
| **Lecture Day** | **Topic ( Including Assignment / Test )** | **Practical Day** | **Topic** |
| 1 | 1 | Need for securing a network; Principles of Security, | 1 | Installation and comparison of various anti virus software |
| 2 | Type of attacks, |
| 3 | Introduction to cyber crime, |
| 2 | 1 | Cyber law-Indian Perspective (IT Act 2000 and amended 2008) | 2 | Installation and comparison of various anti virus software |
| 2 | Cyber ethics, ethical hacking. |
| 3 | What is hacking? attacker, phreaker etc. |
| 3 | 1 | Assignment And Revision | 3 | Installation and comparison of various anti virus software |
| 2 | Introduction to basic encryption and decryption |
| 3 | Concept of symmetric and asymmetric key cryptography |
| 4 | 1 | Overview of DES | 4 | Installation and study of various parameters of firewall. |
| 2 | RSA And PGP encryption algo |
| 3 | Introduction to Hashing: MD5 and SSL |
| 5 | 1 | SSH, and HTTPS | 5 | Installation and study of various parameters of firewall. |
| 2 | Digital Signatures |
| 3 | Digital certification, IPSec |
| 6 | 1 | Assignment And Revision | 6 | Viva Voice |
| 2 | Test |
| 3 | Virus, Worms and Trojans Definitions |
| 7 | 1 | Preventive measures-Access Control, | 7 | Study of VPN. |
| 2 | Process configuration, virus scanners, |
| 3 | Heuristic scanners, Checksum Verification |
| 8 | 1 | Application level virus scanners, deploying virus protection. | 8 | Study of VPN. |
| 2 | Assignment And Revision |
| 3 | Firewalls Definition, Limitations of firewall |
| 9 | 1 | Types of firewalls, firewall configuration, | 9 | Study of various hacking tools |
| 2 | Intrusion Detection System (IDS) Introduction |
| 3 | IDS limitations – teardrop attacks, |
| 10 | 1 | Counter measures; Host based IDS set up | 10 | Study of various hacking tools |
| 2 | Assignment And Revision |
| 3 | Test |
| 11 | 1 | Handling Cyber Assets- Configuration policy as per standards | 11 | Viva Voice |
| 2 | Disposable policy |
| 3 | Virtual Private Network (VPN) Basics |
| 12 | 1 | Setting of VPN, VPN diagram | 12 | Practical applications of digital signature |
| 2 | Configuration of required objects |
| 3 | Exchanging keys, modifying security policy |
| 13 | 1 | Disaster categories | 13 | Practical applications of digital signature |
| 2 | Network disasters – cabling, topology |
| 3 | Single point of failure |
| 14 | 1 | Save configuration files | 14 | Practical applications of digital signature |
| 2 | Server disasters – UPS, RAID |
| 3 | Clustering |
| 15 | 1 | Backups, server recovery | 15 | Viva Voice |
| 2 | Assignment And Revision |
| 3 | Test |