



Information security - IV Computer Science and Engineering

Instructor Name: Prof.Vasan

Institute: IIT Madras

Department: Computer Science and Engineering

About Instructor: Vasan holds an undergraduate and masters degree from BITS Pilani and have been working in the IT Industry for close to 25 years now. Vasan has been working with different leading IT companies in many capacities both in India and abroad in the areas of network management, network appliance development and security domains. He has been working close to 7 years with Cisco Systems and have been part of the engineering of different Cisco products. He has also been involved with engineering a network storage appliance product for a start up company. Currently, Vasan is acting as a senior technical consultant for different organizations and institutions like Secure engineering group in the Computer Science department of IIT (Chennai) in designing and developing indigenous technology solutions in the areas of network and security under the "Make in India"™ initiative. As part of professional career, Vasan has also been associated in delivering training programs in the areas of Operating System, Computer Networks, Programming Languages, Network Security and Storage Networking to top IT service companies in India as well as premier educational universities.

Pre Requisites: : Basic Programming skills

Core/Elective: : Core

UG/PG: : Both

Industry Support : TCS/InfoSys/Wipro/Inautix/CTS/Polaris/All Financial Institutions/Any other organization that runs their own IT infrastructure/

Course Intro: : - Short evaluation on scripting, Networking basics (Contents of IS L3) - Introduction to Kali Linux - Layer 2 and Layer 3 Discovery using Kali Linux with demo/practice - Layer 4 discovery using Kali Linux with demo/practice - Port scanning feature in Kali Linux with demo/practice - Finger printing (Specific OS details and vulnerabilities) in Kali Linux with demo/practice - DoS and Web Application Scanning in Kali Linux with demo/practice - Automating Kali Linux with tools - Network Forensics: An introduction and acquisition of evidence - Analysis and tools of network packets and flows - Unplugged: Wireless Network Forensics " Tools and Scripts - Network Forensics: Intrusion and Detection using Snort tool - Network Forensics: Network devices (Switches,Routers, Firewalls) and Proxies

COURSE PLAN

SL.NO	Week	Module Name
1	1	- Short evaluation on scripting, Networking basics (Contents of IS L3) - Introduction to Kali Linux
2	2	Layer 2 and Layer 3 Discovery using Kali Linux with demopractice
3	3	Layer 4 discovery using Kali Linux with demopractice - Port scanning feature in Kali Linux with demopractice
4	4	Finger printing (Specific OS details and vulnerabilities) in Kali Linux with demopractice



5	5	DoS and Web Application Scanning in Kali Linux with demopractice - Automating Kali Linux with tools
6	6	Network Forensics: An introduction and acquisition of evidence - Analysis and tools of network packets and flows
7	7	Unplugged: Wireless Network Forensics – Tools and Scripts - Network Forensics: Intrusion and Detection using Snort tool
8	8	Network Forensics: Network devices (Switches,Routers, Firewalls) and Proxies