

CS - 15**Network Technology & Administration with SEO****Unit : 1****Basic of Network and LAN Sharing with Transmission Media**

- Network concepts
 - What is network
 - Use of network
- Network Services
- Network Access Methods
 - csma / cd, csma / ca,
 - Token passing
 - Polling
- Advanced Network Topologies Ethernet, CDDI, FDDI
- Communication Methods
 - Unicasting
 - Multicasting
 - Broadcasting
- OSI Reference model with 7 Layers
- TCP/IP network model with 4 Layers
- File and Print sharing in LAN
- Encryption & Compression
- Transmission Media
 - Types of Transmission media
 - Guided media
 - Co - Axial Cable,
 - Twisted Pair Cable,
 - Crimping of Twisted pair cable
 - Fiber Optic Cable
 - Unguided media
 - Infrared, Laser, Radio, Microwave,
- Multiplexing & Demultiplexing
- Cable network devices
- Wireless network devices

Unit : 2**Network Protocols, Network Routing and IP Addressing**

- Packets & Protocols
- Conn. Oriented Protocols -TCP & connection less protocols-UDP
- What is routing
- Types of Routing
 - static
 - dynamic
 - default
- What is IP address?

- How to configure IP Address in PC
 - What is DHCP ?
 - Static IP & Dynamic IP
 - Types of IP address
 - Ipv4
 - Class structure
 - subnetting, supernetting
 - Ipv6
 - Basic structure of ipv6
 - Implementation of ipv6
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Unit : 3**Basics of Network Security, Internet connection & Sharing**

- Fundamental of Network Security
 - Security methods
 - Encryption
 - Cryptography
 - Authentication
 - Security Principle –CIA Model
 - Basics of Internet
 - How internet is connecting with computer
 - Technology related internet
 - Dial up tech.
 - ISDN network tech.
 - Lease line tech.
 - VPN
 - Types of VPN
 - Use of VPN
 - VPN protocols (PPTP, L2TP, IPsec.)
 - Proxy server, Firewall
 - GPS, GPRS
 - CCTV tech.
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Unit : 4**Search Engine Basics and First Stages of SEO**

- The Mission of Search Engines
 - The Market Share of Search Engine
 - The Human Goals of Searching
 - How People Search?
 - Types of Queries
 - Eye Tracking: How Users Scan Results Pages?
 - Click Tracking: How Users Click on Result? Natural Versus Paid
 - Understanding Search Engine Results
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- Algorithm – Based Ranking Systems: Crawling Indexing, and Ranking
- Advanced Search Techniques / Operators
- Setting SEO Goals and Objectives
- The Major Elements of Planning
- Identifying the Site Development Process and Players
- Defining Site’s Information Architecture
- Combining Business Assets and Historical Data to Conduct SEO/Website SWOT Analysis

Unit : 5

Developing an SEO – Friendly Website with Keyword Research

- The Theory Behind Keyword Research – Long Tail & Short Tail
- Making Site Accessible to Search Engines
- Creating an Optimal Information Architecture
- Root Domains, Subdomains, and Microsites
- Keyword Targeting
- Content Optimization
- Duplicate Content Issues
- Content Delivery and Search Spider Control
- Keyword Research Tools
- XML Sitemaps
- Flat Versus Deep Architecture
- The Opportunities in Vertical Search
- The Increasing Importance of Local, Mobile, and Voice Recognition Search
- The Ongoing Evolution of Search
- Practical demo of Blog Website Using WordPress or Google Blogger

	Class Room	Seminar	Expert Talk	Test	Total
No. Of Lecture	60	05	05	05	75

Reference Books:

- 1) Networking Essential - Glenn Berg Tech. Media
- 2) MCSE Self-Paced Training Kit (Server 2003)
- 3) Data Communication and Networking - B A Forouzan
- 4) The Art of SEO : Mastering Search Engine Optimization By Eric Enge, Stephan Spencer, Rand Fishkin, Jessie C Stricchiola, O'Reilly Media, October, 2009
- 5) Web Searching Technology and Search Engine Optimization[ISBN: 978 - 93 - 81786 - 92 - 5] by Bharat & Company
- 6) SEO: Search Engine Optimization Bible, By Jerri L. Ledford, 2nd Edition, Wiley India, April, 2009
- 7) SEO Warrior: Essential Techniques for Increasing Web Visibility By John I Jerkovic, O'Reilly Media, November, 2009