



**Course Name:** Network Essentials

**Course Code:** T3224

**(UG/PG):** UG

**Number of Credits:** 2

**Level:** 1

**Learning Objective(s):** This course teaches the basic concepts and terminology of networking. After completion of the course the student will be able to define network and familiar with the network topologies, protocols.

**Pedagogy:**

Lecture  
Case Study

**Pre-requisites:** NA

**Course Outline:**

Sr. No.	Topics	Hours
1	Introduction Uses of the computer network, LAN, WAN, MAN, wireless network. Network Topology, Network Architecture, Data and Signals	5
2	Internetworking devices: Repeater, Bridge, Hub, Switch, Router, Gateways	4
3	Layered Architecture, Design issues of the layers, OSI reference model. The Physical Model: Transmission Media	3
4	TCP/IP Suite Layers of TCP/IP models, Protocols, IP Addressing, subnetting, Domain Name System (DNS)	12
5	Troubleshooting with TCP/IP Utilities Ping, Tracert, Netstat, ARP, Ipconfig, Nslookup	3
6	Network Security Virus and Anti Virus, Firewall (types and functionality)	3
	<b>Total</b>	<b>30</b>

**Book Recommended:**

1. Computer Networks by Andrew Tanenbaum

2. Data Communications and Networking, Behrouz A. Forouzan

**Research Papers/Articles recommended for reading:**

**Suggested Evaluation Methods:**

Written Test  
Online quiz  
Viva

**Parallel/Similar courses the existing curriculum:**

Sr.No.	Name of the course	Institute where it was offered

Name of Member					
Designation					
Org. / Inst.	SICSR				
Signature					

Name of the Expert:

Signature:

Date: