KONGU ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE – 638 107

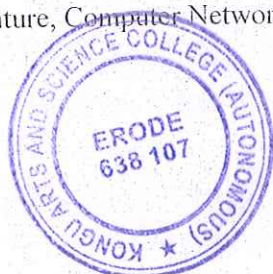### DEPARTMENT OF COMPUTER APPLICATIONS

VALUE ADDED COURSE (2018-2019) – SYLLABUS
18VCANA– NETWORK ADMINISTRATION

UNIT I	Basics of Computers and Networks	8 Hours
	Computer Basics - Components of Computer System: Hardware and Software Components - I/O Process - Network Basics - The Need and Applications of Computer Networks – The Roles and Responsibilities of a Network Administrator - Types of Networks – Topology.	
UNIT II	Network Components and Transmission Medium	9 Hours
	Basic Network Components: Ethernet Card – Switch – Hub - Bridges – Routers – Modem - LAN Tester - Punching tool - UTP – STP – Coaxial - Fiber Optics – Wireless – Bluetooth – Connecters.	
UNIT III	Network Models & Protocols	8 Hours
	OSI and TCP/IP Models - Host - Work group – Domain - Subnet - Subnet Mask – Gateway - Intranet – Internet - Proxy - DNS – FTP – SNMP – UDP – DHCP - Internet Protocol and TCP/IP.	
UNIT IV	Configuring a Network	8 Hours
	Crimping – Crimping Techniques – Color Combination - Identifying Color Combination of Network Cables – Designing the Network – Setting up the Network - IP Addressing Scheme - Connecting a LAN Network – Creating Domain in the Server.	
UNIT V	Network Maintenance	7 Hours
	System Administration - Basic Network Commands and its usage - Accessing Remote Systems – Maintaining the Network - Monitoring Network Services - Windows Server Installation.	
Total Hours		40 Hours

Books for Reference

1. Wayne Tomasi, Introduction to Data communication and Networking, PEARSON Edition.
2. Olivier Bonaventure, Computer Networking: Principles, Protocols and Practice.

Dr. N. RAMAN
PRINCIPAL,
KONGU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
NANJANAPURAM, ERODE - 638 107.

PRACTICAL LIST

1. Design a simple network using various topologies.
2. Discuss various types of networks.
3. Demonstrate networking components and its usage.
4. Demonstrate the various transmission medium and its differences.
5. Explain the data transfer mechanism through OSI models.
6. Explain the various protocols and its usages.
7. Demonstrate the color coding and UTP cable crimping techniques.
8. Design and configure a simple LAN network.
9. Demonstrate the basic networking commands and its usages.
10. Demo the windows server installation.

OUTCOME:

At the end of this course, each student should be able to

- Have a good overall picture of computer networking in general and specific.
- Install network software's and operating systems.
- Configure, monitor and maintain a simple network environment.

Dr. N. RAMAN
PRINCIPAL.
KONGU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
NANJANAPURAM, ERODE - 638 107