MBA438: DATA COMMUNICATION AND NETWORKING SECURITY

Teaching Scheme	Examination Scheme
Lectures: 4 hrs./Week Tutorials: 1 hrs./Week Credits: 4	Class Test -12Marks Teachers Assessment - 6Marks Attendance – 12 Marks End Semester Exam – 70 marks

Course Objectives:

- To understand the basic concepts of data communication, layered model, protocols and inter- working between computer networks and switching components in telecommunication systems.
- Discuss the nature, uses and implications of internet technology.
- To understand the functioning of Frame Relay, ATM.
- An overview of security issues related to data communication in networks.

Hours: 40

Unit I(10 Hrs): Introduction – Data Communication, Networks, Internet, Intranet, Protocols, OSI & TCP/IP Models. Transmission Media, Switching, Connecting Devices, Backbone networks, Concept of VLAN Network Layer Logical addressing IPv4 Addressee & classless address, NAT Addressing.

Unit II(10 Hrs): Data Link Control & Protocol, Multiple Access, Channelization, Wired LAN, Ethernet, Ethernet frame, Addressing, Wireless LAN, Bluetooth, Cellular telephony,

Unit III(10 Hrs): Network layer protocol – internetworking, IPv4 protocol, IPv6 Protocol, Routing Protocols, Transport Layer – Process to process delivery, UDP, TCP Congestion Control, Application Layer – DNS, Remote Logging (Telnet), SMTP, FTP, WWW, HTTP.

Unit IV(10 Hrs): Introduction to system and network security, Cryptography, Network Security, Security at Application Layer, Security at Transport Layer, Security at Network Layer (IPSec) Firewall and Intrusion Detection

Dean Academics
Faculty of Management
Invertis University,

Registrar
Invertis University
Bareilly

Head
Department of Management (MBA)
Faculty of Management

Suggested Readings:

1. Data Communication and Networking, Forouzen, TMH
2. Computer Networks, A.S. Tanenbaum, Pearson Education
3. Data and Computer Communication, W. Stallings, Macmillan Press
4. Computer Networks Anuranjan Misra, Acme Learning
5. Essential of TCP/IP, G. Shanmugarathinam, Firewall Media

COURSE OUTCOMES : *After completion of this course, the student will be able to*

	COURSE OUTCOMES DESCRIPTION
CO1	Able to understand the basics of data communication, networking, internet and their importance.
CO2	Ability to analyse the services and features of various protocol layers in data networks
CO3	Ability to differentiate wired and wireless computer networks
CO4	Able to analyse TCP/IP and their protocols.
CO5	Able to recognize the different internet devices and their functions.
CO6	Able to identify the basic security threats of a network.

Employable Skills	Measuring Tools
Ability to identify and apply the knowledge of subject practically in real life situations	Exercise Workshop Quiz Classroom Discussions

Registrar
Invertis University
Bareilly

Dean Academics
Faculty of Management
Invertis University, Bareilly (UP)

Head
Department of Management
Faculty of Management
Invertis University, Bareilly