

TECNIA INSTITUTE OF ADVANCED STUDIES

Grade 'A' Institute

Department of Information, Communication & Technology

Master Of Computer Applications (MCA)

Scheme and Syllabus (w.e.f. Academic Session 2020-21 onwards)

Course Code: MCA-103

Course Name: Computer Networks

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LEARNING OBJECTIVES:

In this course, the learners will be able to develop expertise related to the following:

1. Understand basics, topologies and working mechanism of wired and wireless computer networks.
2. Analyze the features and operations of protocols of OSI reference model & TCP/IP protocol suite,
3. Design, calculate, and apply routing mechanisms for IPv4 & IPv6.
4. identify the networking requirements for an organization and select & propose appropriate architecture and technologies.
5. Work on Network addressing, design and implementation.

PRE-REQUISITES:

1. Basic Networking concepts
2. Basic Operating System Concepts

COURSE OUTCOMES (COs):

After completion of this course, the learners will be able to: -

CO #	Detailed Statement of the	BT Level	Mapping to PO #
CO1	Explain the functions of each layer in the OSI reference model and TCP/IP protocol suite while illustrating the process of data encoding and multiplexing.	BTL2	PO1, PO2, PO3, PO7
CO2	Utilize the fundamentals of data communication and networking to identify the topologies and connecting devices of networks.	BTL3	PO1, PO2, PO3, PO7, PO10
CO3	Identify and discuss the underlying concepts of IPv4 & IPv6 protocols, along with their characteristics and functionality.	BTL3	PO1, PO2, PO3, PO4
CO4	Discover the appropriate MAC layer/ data link layer protocols for the given network.	BTL4	PO1, PO2, PO3, PO4, PO7
CO5	Evaluate and implement routing algorithms and multicasting.	BTL5	PO1, PO2, PO3, PO4, PO11
CO6	Adapt transport and application layer protocols along with concepts of mobility and security in networks.	BTL6	PO1, PO2, PO3, PO4, PO6, PO7, PO8