



BONAM VENKATA CHALMAYYA INSTITUTE OF TECHNOLOGY AND SCIENCE
(Autonomous)

BATLAPALEM, ANDHRAPRADESH, INDIA
BCA BR24II YEAR COURSE STRUCTURE

Applicable for batches admitted from 2024

II Year II Sem	COMPUTER NETWORKS	L	T	P	C
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Course code :24BC4T10

Course Objectives:

The main objectives of the course is to provide an understanding of computer networking theory, including principles embodied in the protocols designed for the application layer, transport layer, network layer, and data link layer of a networking stack

UNIT-I:

Introduction: Data Communications, Networks, Network Types, Internet History, Network Models: Protocol Layering, The OSI Model, TCP/IP Protocol Suite, Introduction to Physical Layer: Transmission Impairments, Data Rate Limits, Performance.

UNIT-II:

Introduction to Data-Link- Layer: Link-Layer Addressing, Error Detection and Correction: Block Coding, Cyclic Codes, Checksum Data Link Control: Data-Link Layer Protocols ,HDLC, Point-To-Point (PPP), Media Access Control (MAC): ALOHA, CSMA, CSMA/CD, CSMA/CA, Reservation, Polling, Token Passing, FDMA, TDMA, CDMA

UNIT-III:

Introduction to Network Layer: Network-Layer Services, Packet Switching, Network-Layer Performance, IPV4 Addresses, Network Layer Protocols: Internet Protocol (IP), ICMPv4, Mobile IP, Unicast Routing: Routing Algorithms, Unicast Routing Protocols, Next Generation IP: IPv6 Addressing

UNIT-IV:

Introduction to Transport Layer: Introduction, Transport-Layer Protocols, Transport-Layer Protocols: User Datagram Protocol, Transmission Control Protocol: TCP Services, TCP Features, Segment, ATCP Connection ,TCP Congestion Control, Flow Control, Error Control

University Nominee Dr. Suneetha Eluri		Alumni Member Mr. Hari Suresh Poliseti	
Subject Expert : 1 Dr. B Kezia Rani		Chairman Mr. A V S M Ganesh	
Subject Expert : 2 Dr. Suneel Kumar Duvvuri		Member Mr. G L N V S Kumar	
Representative From Industry Mr. Sai Krishna Narima		Member	

24/1/2024
HEAD OF THE DEPARTMENT
MASTER OF COMPUTER APPLICATIONS
INSTITUTE OF TECHNOLOGY & SCIENCE



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UNIT-V:

Application Layer: WWW, E-MAIL, Domain Name System (DNS), Quality of Service: Flow

Control To Improve QoS, Integrated Services

Text Books:

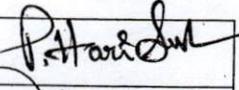
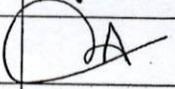
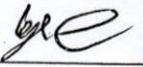
1. Beerhouse A. Frozen, "Data Communications and Networking", 5th Edition, McGraw Hill Education, 2013.

Reference Books:

1. Andrew S. Tanenbaum, David J. Wetherall, "Computer Networks", 5th Edition, Prentice Hall, 2011.
2. Larry L. Peterson and Bruce S. Davie, "Computer Networks: A System Approach", 5th Edition. MKP, 2012.
3. James F. Kurose, Keith W. Ross, "Computer Networking, A Top-Down Approach", 5th Edition, Pearson, 2012.

Web Resources:

1. <https://www.geeksforgeeks.org/computer-network-tutorials/>
2. <https://codescracker.com/networking/>

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