

COMPUTER NETWORKS

Course Code	19CS3403	Year	II	Semester	II
Course Category	Program Core	Branch	CSE	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	Data Communication (19CS3303)
Continuous Internal Evaluation :	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes

Upon successful completion of the course, the student will be able to:

CO1	Understand the basic functions and protocols of different layers	L2
CO2	Apply appropriate Packet switching mechanism/Addressing Formats for a given scenario	L3
CO3	Apply appropriate Transport & Application layer protocol for a given context.	L3
CO4	Analyze the given scenario and use appropriate Unicast routing algorithm	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3													
CO2	3													
CO3	3								3	3				
CO4	3													

CourseContent		
UNIT-1	Data-LinkLayer: Introduction to Data-Link Layer - Introduction, Link-Layer Addressing. ErrorDetectionandCorrection-Introduction,CyclicRedundancyCheck. Data Link Control (DLC) - DLC Services. MediaAccessControl(MAC)-RandomAccess,ControlledAccess.	CO1, CO3
UNIT-2	NetworkLayer: Introduction to Network Layer - Network-Layer Services, Packet Switching,Network-LayerPerformance,IPv4Addresses,Forwardingof IP Packets.	CO1, CO2
UNIT-3	Network-Layer Protocols - Internet Protocol (IP), ICMPv4. Unicast Routing-Introduction,RoutingAlgorithms,UnicastRoutingProtocols. NextGenerationIP-IPv6Addressing,TheIPv6Protocol.	CO1,CO2, CO4
UNIT-4	TransportLayer: IntroductiontoTransportLayer-Introduction,Transport-LayerProtocols. Transport Layer Protocols-Introduction, User Datagram Protocol(UDP), Transmission Control Protocol(TCP)	CO1, CO3
UNIT-5	ApplicationLayer: StandardClient-ServerProtocols-WorldWideWebandHTTP,FTP, Electronic Mail, Telnet, Secure Shell (SSH), Domain Name System (DNS)	CO1, CO3
LearningResources		
TextBooks	1.DataCommunicationsandNetworking,BehrouzA.Forouzan,FifthEdition,McGraw- Hill	
Reference Books	1.ComputerNetworkingATop-DownApproach,JamesF.Kurose,KeithW.Ross,Sixth Edition,Pearson Education	

	2. Computer Networks, Tanenbaum Andrew S, David J. Wetherall, Fifth Edition, Pearson Education 3. Computer Networks - A Systems Approach, Larry L. Peterson, Bruce S. Davie, Fifth Edition, Morgan Kaufmann.
e-Resources & other digital material	https://nptel.ac.in/courses/106/105/106105183 / https://nptel.ac.in/courses/106/105/106105081 / https://www.youtube.com/playlist?list=PLEAYkSg4uSQ2NMmzNNsEK5RVbhxqx0BZF

CourseCoordinator

ModuleCoordinator

HOD