LESSON PLAN

CLASS: - B.C.A 3rd Year   SEMESTER:- 5th Sem

Name of Asst/Associate Prof: - Dr.Sudhir

Subject/Paper: - Data Communication and Networking

S.No.	Week Days	Syllabus
Unit-1	15/07/2025 - 05/08/2025	Introduction to Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices, Nodes, and Hosts; Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; Network Applications and Application Protocols; Computer Communications and Networking Models
	06/08/2025 – 20/08/2025	Decentralized and Centralized Systems, Distributed Systems, Client/Server Model, Peer-to-Peer Model, WebBased Model, Network Architecture and the OSI Reference Model, TCP/IP reference model, Example Networks: The Internet, X.25, Frame Relay, ATM
Unit-2	21/08/2025 – 05/09/2025	Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate , maximum data-rate of channel, Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Asynchrous and synchrous transmission, data encoding techniques, Modulation techniques
	06/09/2025 – 20/09/2025	Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Dialup Networking; Analog Modem Concepts; DSL Service
Unit-3	21/09/2025 – 05/10/2025	Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; Sliding Window Protocols; Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring; Introduction to LAN technologies: Ethernet, switched Ethernet,
	06/10/2025 – 26/10/2025	VLAN, fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth; Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways.
Unit-4	04/11/2025 – 12/11/2025	Network Layer and Routing Concepts: Virtual Circuits and Datagrams; Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing, Hierarchical Routing; Congestion Control Algorithms; Internetworking;
	13/11/2025 – 18/11/2025	Network Security Issues: Security threats; Encryption Methods; Authentication; Symmetric – Key Algorithms; Public-Key Algorithms

LESSON PLAN

CLASS: - B.C.A 3rd Year   SEMESTER:- 5th Sem

Name of Asst/Associate Prof: - Dr.Sudhir

Subject/Paper: - Computer Graphics

S.No.	Week Days	Syllabus
Unit-1	15/07/2025 - 05/08/2025	Graphics Primitives: Introduction to computer graphics, Basics of Graphics systems, Application areas of Computer Graphics, overview of graphics systems, video-display devices, and raster-scan systems, random scan systems, graphics monitors and workstations and input devices.
	06/08/2025 – 20/08/2025	Output Primitives: Points and lines, line drawing algorithms, mid-point circle and ellipse algorithms. Filled area primitives: Scan line polygon fill algorithm, boundary fill and floodfill algorithms .
Unit-2	21/08/2025 – 05/09/2025	2-D Geometrical Transforms: Translation, scaling, rotation, reflection and shear transformations, matrix representations and homogeneous coordinates, composite transforms, transformations between coordinate systems.
	06/09/2025 – 20/09/2025	2-D Viewing: The viewing pipeline, viewing coordinate reference frame, window to viewport coordinate transformation, viewing functions, Cohen-Sutherland and Cyrus-beck line clipping algorithms, Sutherland –Hodgeman polygon clipping algorithm.
Unit-3	21/09/2025 – 05/10/2025	3-D Object Representation: Polygon surfaces, quadric surfaces, spline representation, Hermite curve,
	06/10/2025 – 26/10/2025	Bezier curve and B-Spline curves, Bezier and B-Spline surfaces. Basic illumination models, polygon-rendering methods
Unit-4	04/11/2025 – 12/11/2025	3-D Geometric Transformations: Translation, rotation, scaling, reflection and shear transformations, composite transformations.
	13/11/2025 – 18/11/2025	3-D Viewing: Viewing pipeline, viewing coordinates, view volume and general projection transforms and clipping.

LESSON PLAN

CLASS: - B.C.A 3rd Year   SEMESTER:- 5th Sem

Name of Asst/Associate Prof: - Dr.Sudhir

Subject/Paper: - MANAGEMENT INFORMATION SYSTEM

S.No.	Week Days	Syllabus
Unit-1	15/07/2025 - 05/08/2025	Introduction to system and Basic System Concepts, Types of Systems, The Systems Approach, Information System: Definition & Characteristics
	06/08/2025 – 20/08/2025	Types of information, Role of Information in Decision-Making, Sub-Systems of an Information system: EDP and MIS management levels, EDP/MIS/DSS
Unit-2	21/08/2025 – 05/09/2025	An overview of Management Information System: Definition & Characteristics, Components of MIS, Frame Work for Understanding MIS: Information requirements & Levels of Management
	06/09/2025 – 20/09/2025	Simon's Model of decision-Making, Structured Vs Un-structured decisions, Formal vs. Informal systems.
Unit-3	21/09/2025 – 05/10/2025	Developing Information Systems: Analysis & Design of Information Systems:
	06/10/2025 – 26/10/2025	Implementation & Evaluation, Pitfalls in MIS Development.
Unit-4	04/11/2025 – 12/11/2025	Functional MIS: A Study of Personnel, Financial and production MIS, Introduction to ebusiness systems
	13/11/2025 – 18/11/2025	Ecommerce – technologies, applications, Decision support systems – support systems for planning, control and decision-making