Lesson Plan (April-July,2022)

Name of the Assistant Professor- Shama Subject- Computer Science

Month	B.Com(CAV) (II sem) Programming in C	BCA (II Sem) System Analysis and Design	BCA (VI Sem) Computer Graphics
April	History of C, Importance of C, Structure of a C Program. Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant. Unformatted & formatted I/O function in C Arithmetic, relational, logical, bitwise, unary, assignment, conditional operators and special operators.	System Concept: Definition, Characteristics, Elements of system Types of System: Physical and abstract system Open and closed system Man-made information systems. System Development Life Cycle: Phases of system development Feasibility study: Technical, Operational & Economic Feasibilities. Role of system analyst	Introduction to Computer Graphics Interactive and Passive Graphics; Applications of Computer Graphics Display Devices: CRT Random Scan ,Raster Scan, Refresh Rate and Interlacing Color CRT Monitor, DVST, Flat-Panel Displays: Plasma Panel, LED, LCD; Lookup Table, Interactive Input Devices, Display Processor, General Purpose Graphics Software, Coordinate Representations
May	Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity. Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement.	System Planning: Bases for planning in system analysis. Initial Investigation: Determining user's requirements and analysis, fact finding process and techniques. Tools of structured Analysis: Data Flow diagram, data dictionary, IPO and HIPO charts, Gantt charts, pseudo codes, Flow charts, decision tree, decision tables.	Point-Plotting Techniques: Scan Conversion, Scan-Converting a Straight Line: The Symmetrical DDA, The Simple DDA, Bresenham's Line Algorithm; Scan-Converting a Circle: Circle drawing using Polar Coordinates, Bresenham's Circle Algorithm, Scan-Converting an Ellipse: Polynomial Method, Trigonometric Method; Polygon Area Filling: Scan-line Fill and Flood Fill Algorithms

June	Decision making & looping: For, while, and do-while loop, jumps in loops, break, continue statement. Functions: Definition, prototype, passing parameters, recursion. Storage classes in C: auto, extern, register and static storage class, their scope, storage, &lifetime	Cost/Benefit Analysis: Data analysis cost and benefit analysis of a system. Input/ Output and Form Design, File Organization and database design: Introduction to files and database, File structures and organization, objectives of database design, logical and physical view of data.	Two-Dimensional Graphics Transformation: Basic Transformations: Translation, Rotation, Scaling; Matrix Representations Homogeneous Coordinates; Other Transformations: Reflection, Shearing, Coordinate , Composite Inverse; Affine; Raster Graphical Input: Pointing and Positioning Devices and Technique
July	Arrays: Definition, types, initialization, processing an array passing arrays to Functions, Strings & arrays. Structure and unions, data file	System testing: Introduction, objectives of testing, test planning, testing techniques. Quality assurance: Goal of quality assurance, levels of quality assurance System implementation and software maintenance: primary activities in maintenance	Two-Dimensional Viewing: Window and Viewport, 2-D Viewing Transformation Clipping: Cohen-Sutherland Line Clipping Algorithm, Mid-Point Subdivision Line Clipping Algorithm; Polygon Clipping: Sutherland- Hodgman Polygon Clipping Algorithm; Three-Dimensional Graphics: Three-Dimensional Display Methods; 3-D Transformations: Translation, Rotation, Scaling

Subject/Month	April	May	June	July
BCA (IV Sem) RDBMS	Relational Model Concepts, Codd's Rules for Relational Model, Functional Dependencies and Normalization:-Purpose, Data Redundancy and Update Anomalies Functional Dependencies:-Full Functional Dependencies and Transitive Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).	Relational Algebra:-Selection and Projection, Set Operation, Renaming, Join and Division, Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus.	SQL: Data Definition and data types, SQL Operators, Specifying Constraints in SQL, Basic DDL, DML and DCL commands in SQL, Simple Queries Nested Queries, Tables, Views, Indexes, Aggregate Functions, Clauses	PL/SQL architecture, PL/SQL and SQL*Plus, PL/SQL Basics, Advantages of PL/SQL, The Generic PL/SQL Block: PL/SQL Execution Environment, PL/SQL Character set and Data Types, Control Structure in PL/SQL, Cursors in PL/SQL, Triggers in PL/SQL, Programming using PL/SQL