

TEACHING PLAN

(July, 2025 to November, 2025)

Name of the Teacher:Poonam(BCA)

Subject:Java Programming

Class:BCA 3rd Semester

Paper:24BCA404DS03

1st week	Introduction to Java: Java Features, Java Virtual Machine (JVM), Bytecode, Java API, Java Development Kit (JDK), Garbage Collection
2nd week	Language Basics: Keywords, Constants, Variables, Data Types, Operators, Expressions
3rd week	Decision Making, Branching, and Looping
4th week	Introducing Classes, Objects, and Methods: Defining a Class, Methods Declaration, Creating Objects, Accessing Class Members
5th week	Constructors, Method Overloading, Wrapper Classes, Inheritance, Method Overriding
6th week	Final Class, Variables and Methods, Abstract Classes, Interfaces
7th week	Arrays: Creating and Using Arrays, String Operations

8th week	String Buffer, String Builder, and String Tokenizer Classes; Vector Class
9th week	Packages: Creating and Using Packages, Static Import, Java API Packages
10th week	Exceptions: Exception Handling Mechanism, Multiple Catch Statements, throw and throws, Using finally, Creating User-Defined Exceptions
11th week	Multithreaded Programming: Single vs Multi-threaded Programs, Creating Threads using Thread Class
12th week	Thread Life Cycle, Stopping/Blocking Threads, Thread Priority, Synchronization, Runnable Interface
13th week	Managing Input/Output Streams: Concept of Streams, Byte and Character Streams
14th week	Reading and Writing from Console and Files, Input/Output Exceptions
15th week	Applet Programming: How Applets Differ from Java Applications, Applet Life Cycle, APPLET Tag
16th week	Running Applets, Passing Parameters to Applets

17th week	Event Handling: Mechanism, Delegation Event Model, Event Classes, Event Listener Interfaces, Adapter and Inner Classes
18th week	GUI Programming: Frame Window, Graphics and Text, AWT Controls, Layout Managers, Menus; Revision and Project Discussion

TEACHING PLAN

(July, 2025 to November, 2025)

Name of the Teacher:Poonam(BCA)

Subject:Computer Architecture

Class:BCA 1st Semester

Paper:25BCA401DS02

1st week	Introduction to Digital Principles: Definition for Digital Signals, Digital Logic, Digital Computers, Von Neumann Architecture
2nd week	Boolean Laws and Theorems, K-Map: Truth Tables to K-Map (2, 3, 4 variables)
3rd week	K-Map Simplifications, Don't Care Conditions, SOP and POS forms
4th week	Number Systems: Decimal, Binary, Octal, Hexadecimal, Number System Conversions
5th week	Binary Arithmetic: Addition, Subtraction, BCD, Octal, and Hexadecimal Arithmetic; Binary Codes: ASCII, EBCDIC, Excess-3, Gray Code; Error Detecting and Correcting Codes
6th week	Combinational Circuits: Half Adder, Full Adder, Subtractor, Encoders, Decoders

7th week	Multiplexers, Demultiplexers, Implementation using Logic Gates
8th week	Sequential Circuits: Flip-Flops (SR, D, JK, T), Shift Registers, Parallel Load, Bidirectional Shift Register
9th week	Binary Counters – 4-bit Synchronous and Asynchronous Counters
10th week	Basic Computer Organization and Design: Instruction Codes, Computer Registers, Computer Instructions
11th week	Timing and Control, Instruction Cycle, Memory Reference Instructions, Input/Output Interrupt
12th week	Central Processing Unit: Introduction, General Register Organization, Stack Organization, Instruction Formats
13th week	Addressing Modes, Data Transfer and Manipulation, Program Control, RISC Concepts, RISC vs CISC
14th week	Pipeline and Vector Processing: Parallel Processing, Pipelining, Arithmetic Pipeline, Instruction Pipeline, RISC Pipeline
15th week	Input-Output Organization: Peripheral Devices, Input-Output Interface, Asynchronous Data Transfer, Modes of Transfer

16th week	Priority Interrupt, Direct Memory Access (DMA), Input-Output Processor (IOP)
17th week	Memory Organization: Memory Hierarchy, Main Memory, Auxiliary Memory, Cache Memory, Virtual Memory
18th week	Memory Management: Associative Memory, Memory Management Hardware, Course Review and Revision

TEACHING PLAN

(July, 2025 to November, 2025)

Name of the Teacher:Poonam(BCA)

Subject:Operating System

Class:BCA 3rd Semester

Paper:24BCA403DS01

1st week	Introduction to Operating Systems: Objectives and Characteristics
2nd week	Classification of OS: Batch, Multi-programming, Multi-processing, Multi-tasking, Time-sharing, Distributed, Network, Real-time
3rd week	Operating System Components: System Calls and Services
4th week	Operating System Functions: Process Management, Memory Management, Secondary Storage, I/O, File Management
5th week	Protection and Security; OS Structures – Simple Structure, Monolithic, Layered Approach, Microkernel, Exokernel, Virtual Machines
6th week	Process Management: Process Concept, Process State Model, Process Control Block
7th week	Threads, Scheduling Concepts, Scheduling Queues, Schedulers, Context Switching

8th week	Operations on Processes, Cooperating Processes, Inter-process Communication
9th week	CPU Scheduling: Scheduling Criteria, Algorithms (FCFS, SJF, RR, Priority Scheduling)
10th week	Advanced Scheduling: Multilevel Queue, Multilevel Feedback Queue, Multiple Processor & Real-Time Scheduling
11th week	Memory Management Concepts: Logical & Physical Address Space, Swapping, Contiguous & Non-contiguous Memory
12th week	Paging: Hardware Support, Page Table, Segmentation, Hardware Support, Protection & Sharing
13th week	Virtual Memory: Need, Demand Paging, Pure Demand Paging, Handling Page Faults
14th week	Performance of Demand Paging, Page Replacement Algorithms, Allocation of Frames (Global vs Local), Thrashing
15th week	I/O Management: I/O Devices (Block & Character), Device Controllers, Device Drivers
16th week	I/O Software: Device-Independent I/O, User Space & Kernel I/O Software, DMA, Secondary Storage Structures, Disk Scheduling

17 th week	File System Interface: File Concept, Attributes, Operations, Access Methods (Sequential, Direct, Indexed), Directory Structures
18 th week	File Protection & Sharing, Revision, and Comprehensive Review