Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Mr. Lakhvinder Singh Academic Session: 2023-24

Class: BCA Semester: 5th Subject: BCA–351 Web Designing

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers; Web Servers; Hypertext Transfer Protocol	**24 July to 31 July**	
1	URLs; Searching and Web- Casting Techniques; Search Engines and Search Tools	**01 Aug to 15 Aug**	
2	Steps for Developing Website; Choosing the Contents; Home Page; Domain Names; Internet Service Provider; Planning and Designing Web Site; Creating a Website; Web Publishing: Hosting Site;	**15 Aug to 31 Aug**	
2	Introduction to HTML; Hypertext and HTML; HTML Document Features;	**01 Sep to 15 Sep**	Assignment-1
3	HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links; Headers; Text Styles; Text Structuring;	**15 Sep to 30 Sep**	Test-1
3	Text Colors and Background; Formatting Text; Page layouts; Insertion of Text, Movement of Text	**01 Oct to 15 Oct**	Test- 2
4	Images: Types of Images, Insertion of Image, Movement of Image, Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns, Rows, Width, Colours; Frame Creation and Layouts;	**15 Oct to 31 Oct**	Assignment-2
4	Working with Forms and Menus; Working with Buttons like Radio, Check Box;	**01 Nov to 15 Nov**	
	Revision	**15 Nov to 24 Nov**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Mr. Lakhvinder Singh Academic Session: 2023-24

Class: M.Sc. Comp. Sc. (Software) Semester: 1st Subject: MS-15-11 Web Engg.

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Web Engineering: Categories and Characteristics of Web Applications, Web Applications Vs Conventional Software, Need for an Engineering Approach.	**16 Aug to 31 Aug**	
1	Web Essentials: The Internet, Basic Internet Protocols, WWW, HTTP (Structure of Request and Response Messages), Web Browser and its functions, URL, Web Servers and their features, Defining Virtual Hosts, Secure Servers.	**01 Sep to 15 Sep**	
2	MarkUp Languages: Introduction to HTML, Characteristics, XHTML Syntax and Semantics, Fundamental HTML Elements, Lists, Tables, Frames, Forms, XHTML Abstract Syntax, Creating HTML Pages.	**15 Sep to 30 Sep**	
2	Cascading Style Sheets: Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance, Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning and other useful Style Properties.	**01 Oct to 15 Oct**	Assignment-1
3	Client–Side Programming: Introduction to JavaScript, Perspective, Basic Syntax, Variables and Data types, Statements, Operators, Literals, Functions, Objects, Arrays, Built-in Objects, Debuggers.	**15 Oct to 31 Oct**	Test-1
3	Server-Side Programming: Servlet Architecture, Generating Dynamic Content, Servlet Life Cycle, Sessions, Cookies, URL Rewriting, Servlet Capabilities, Servlets and Concurrency	**01 Nov to 15 Nov**	Test- 2
4	XML: Relation between XML, HTML, SGML, Goals of XML, Structure and Syntax of XML, Well Formed XML, DTD and its Structure, Namespaces and Data Typing in XML, Transforming XML Documents, XPATH,	**15 Nov to 30 Nov**	Assignment-2
4	Template based Transformations, Linking with XML, Displaying XML documents in Browsers & **Revision**	**1 Dec to 6 Dec**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Dr. Priyanka Academic Session :2023-24.

Class : MSC Semester :Ist Subject : MS-15-13 SOFTWARE ENGINEERING

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
Unit-I	Introduction: Software Crisis-problem and causes, Software Processes, Software life cycle models: Waterfall, Prototype, Evolutionary and Spiral models, Overview of Quality Standards like ISO 9001, SEI-CMM, CMMI, PCMM, Six Sigma.	24/07/23-05/08/23	Assignment-I
Unit-I	Software Metrics: Size Metrics like LOC, Token Count, Function Count, Design Metrics, Data Structure Metrics, Information Flow Metrics, cyclomatic complexity, Halstead Complexity measures	07/08/23-19/08/23	
Unit-II	Software Project Planning: Cost estimation, static, Single and multivariate models, COCOMO model, Putnam Resource Allocation Model, Risk management, project scheduling, personnel planning, team structure, Software configuration management, quality assurance, project monitoring	21/08/23-02/09/23	
Unit-II	Software Requirement Analysis and Specifications: Structured Analysis, Data Flow Diagrams, Data Dictionaries, Entity-Relationship diagrams, Software Requirement and Specifications, Behavioral and non-behavioral requirements.	04/09/23-16/09/23	Test-I
Unit-III	Software Design: Design fundamentals, problem partitioning and abstraction, design methodology, Cohesion & Coupling, Function Oriented Design and User Interface Design.	18/09/23-30/09/23	Assignment -II

Unit-III	Coding: Programming style, structured programming. Software reliability: Metric and specification, Musa and JM reliability model, fault avoidance and tolerance, exception handling, defensive programming	03/10/23-14/10/23	
Unit-IV	Software Testing: Functional testing: Boundary Value Analysis, Equivalence class testing, Cause effect graphing, Structural testing: Control flow based and data flow based testing, loop testing, mutation testing, load, stress and performance testing,	16/10/23-11/11/23	Test-II
	Revision	13/11/23-24/11/23	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Dr. Priyanka Academic Session :2023-24.

Class : BCA Semester :5th Subject : OPERATING SYSTEM(BCA-352)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
Unit-I	Operating System: Definition, Characteristics, Components, Functions, Examples, Types of Operating System: Single User/Multi User	24/07/23-05/08/23	
Unit-I	Classification of Operating System: Batch, Multiprogrammed, Timesharing, Multiprocessing, Parallel, Distributed, Real Time; System Calls and System Programs: Process Control, File Manipulation, Device Manipulation, Information Maintenance, Communications	07/08/23-19/08/23	Assignment-I
Unit-II	Process Management: Process concept, Process states and Process Control Block; Process Scheduling: Scheduling Queues, Schedulers, Context Switch; Operation on Processes: Process Creation, Process Termination; Cooperating Processes	21/08/23-02/09/23	Test-I
Unit-II	Introduction to Threads, Inter-process Communication; CPU Scheduling: Basic Concepts, Scheduling Criteria, Scheduling Algorithms: FCFS, SJF, Priority, Round-Robin, Multilevel Queue, Multilevel Feedback Queue Scheduling	04/09/23-16/09/23	
Unit-III	Deadlocks: System Model, Deadlock Characterization, Methods of Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery Memory Management: Introduction, Swapping, Contiguous Allocation: Single-Partition/Multiple Partition Allocation, External/Internal Fragmentation; Paging: Basic Method, Hardware, Implementation of Page table	18/09/23-30/09/23	Assignment -II

Unit-III	Segmentation: Basic Method, Hardware, Implementation of Segment Table, Advantages/Disadvantages of Paging/Segmentation, Virtual Memory: Introduction, Demand Paging, Page Replacement, Page Replacement Algorithms: FIFO, Optimal, LRU, Counting; Thrashing and its cause;	03/10/23-14/10/23	
Unit-IV	File Management: File Concepts, File Attributes, File Operations, File Types, File Access/Allocation Methods, File Protection, File Recovery	16/10/23-11/11/23	Test-II
	Revision	13/11/23-24/11/23	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Dr. Priyanka Academic Session :2023-24.

Class : BSc (III) Semester :5th Subject : Web Engineering

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
Unit-I	Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers;	24/07/23-05/08/23	Assignment-I
Unit-I	Web Servers; Hypertext Transfer Protocol; URLs; Searching and WebCasting Techniques; Search Engines and Search Tools	07/08/23-19/08/23	
Unit-II	Steps for Developing Website; Choosing the Contents; Home Page; Domain Names; Internet Service Provider; Planning and Designing Web Site; Creating a Website; Web Publishing: Hosting Site	21/08/23-02/09/23	Test-I
Unit-II	Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links; Headers;	04/09/23-16/09/23	
Unit-III	Text Styles; Text Structuring; Text Colors and Background; Formatting Text; Page layouts; Insertion of Text, Movement of Text	18/09/23-30/09/23	Assignment -II

Unit-III	Images: Types of Images, Insertion of Image, Movement of Image, Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns, Rows, Width, Colours; Frame Creation and Layouts;	03/10/23-14/10/23	
Unit-IV	Working with Forms and Menus; Working with Buttons like Radio, Check Box;	16/10/23-11/11/23	Test-II
	Revision	13/11/23-24/11/23	

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Summary of Lesson Plan

Name of Teacher : Dr. Priyanka Academic Session :2023-24.

Class : BSc (III) Semester :5th Subject : Database Management System

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
Unit-I	Basic Concepts – Data, Information, Records and files. Traditional file Based Approach Limitations of Traditional File Based Approach, Database Approach- Characteristics of Database Approach,	24/07/23-05/08/23	
Unit-I	Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS.	07/08/23-19/08/23	Assignment-I
Unit-II	Actors on the Scene - Data and Database Administrator, Database Designers, End users Applications Developers and Workers behind the Scene	21/08/23-02/09/23	
Unit-II	Database System Architecture – Three Levels of Architecture, Schemas – External, Conceptual and Internal Level, Database Languages – VDL, DDL, SDL, DML, SQL, Mappings – External/ Conceptual and Conceptual/Internal, Instances, Data Independence – Logical and Physical Data Independence	04/09/23-16/09/23	Test-I
Unit-III	Data Models: High Level, Low Level and Representational – Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Models	18/09/23-30/09/23	Assignment -II

Unit-III	Entity-Relationship Model – Concepts, Entity Types, Entity Sets, Attributes, Relationships, Constraints, Keys , Degree, Cardinality etc. ER Diagrams of any Database Organization- Inventory System, Payroll System, Reservation System, Online Book Store etc.	03/10/23-14/10/23	
Unit-IV	Classification of Database Management System, Centralized and Client Server architecture Relational Data Model:-Brief History, Terminology in Relational Data Structure, Relations, Properties of Relations, Keys – Primary, Secondary, Composite, Candidate, Alternate and Foreign Key, Domains, Integrity Constraints over Relations.	16/10/23-11/11/23	Test-II
	Revision	13/11/23-24/11/23	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher :Dr. Neha Saini Academic Session : 2023-24

Class: BCA I Semester : I Subject : Fundamentals of Computer Science

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Computer Fundamentals: Evolution of Computers through generations, Characteristics of Computers, Strengths and Limitations of Computers, Classification of Computers, Functional Components of a Computer System, Applications of computers in Various Fields. Types of Software: System software, Application software, Utility Software, Shareware, Freeware, Firmware, Free Software.	24/07/23-05/08/23	
I	Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time, concept of memory hierarchy. Primary Memory - RAM, ROM, PROM, EPROM. Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory.	07/08/23-19/08/23	**Ist Assignment**
II	I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver. Input Devices: classification and use, keyboard, pointing devices - mouse, touch pad and track ball, joystick, magnetic stripes, scanner, digital camera, and microphone Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter.	21/08/23-02/09/23	**Ist Test**
II	Introduction to Operating System: Definition, Functions, Features of Operating System, Icon, Folder, File, Start Button, Task Bar, Status Buttons, Folders, Shortcuts, Recycle Bin, Desktop, My Computer, My Documents, Windows Explorer, Control Panel.	04/09/23-16/09/23	
III	The Internet: Introduction to networks and internet, history, Internet, Intranet & Extranet, Working of Internet, Modes of Connecting to Internet.	18/09/23-30/09/23	**IInd Assignment**
III	Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords, e-mail addresses, message components, message composition, mailer features. Browsers and search engines.	03/10/23-14/10/23	**IInd Test**

IV	Threats: Physical & non-physical threats, Virus, Worm, Trojan, Spyware, Keylogers, Rootkits, Adware, Cookies, Phishing, Hacking, Cracking. Computer Security Fundamentals: Confidentiality, Integrity, Authentication, Non-Repudiation, Security Mechanisms, Security Awareness, Security Policy, anti-virus software & Firewalls, backup & recovery.	16/10/23-28/10/23	
I and II	Revision of Unit I and II.	30/10/23-11/11/23	
III and IV	Revision of Unit III and IV.	13/11/23-24/11/23	**Full Syllabus Test**

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Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session :2023-24

Class: BCA II Semester : III Subject : Software Engineering

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes, Phases in Software development: Requirement Analysis, Software Design, Coding, Testing	24/07/23-05/08/23	**Assignment 1**
I and II	Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics. Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS	07/08/23-19/08/23	**Test 1**
II	Characteristics of an SRS, Components of an SRS, Problem Analysis, Information gathering tools, Organizing and structuring information, Requirement specification, validation and Verification. . SCM	21/08/23-02/09/23	
III	Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision tress, Structured English, Entity-Relationship diagrams, Cohesion and Coupling. Gantt chart, PERT Chart, Software Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.	04/09/23-16/09/23	**Assignment II**
IV	Software Project Planning: Cost estimation: COCOMO model, Project scheduling, Staffing and personnel planning, team structure, Software configuration management	18/09/23-30/09/23	
IV	Quality assurance plans, Project monitoring plans, Risk Management. Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing.	03/10/23-14/10/23	**Test II**

I	Revision of Unit I	16/10/23-28/10/23	
II	Revision of Unit II	30/10/23-11/11/23	
III and IV	Revision of Unit III and Unit IV	13/11/23-24/11/23	**Test of Entire Syllabus**

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session :2023-24

Class: M.Sc I Semester : I Subject : Data Structures

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Introduction to Data Structures: Classification of Data Structures, Arrays, Stacks & Queues: Representation of Stacks, Stack Operations, Applications, Queues, Operations on Queues, Circular Queues, Dequeue, Priority Queues, Applications.	16/08/23-02/09/23	**Assignment 1**
I and II	Linked Lists: Introduction, Types, Operations (Insertion, Deletion, Traversal, Searching, Sorting), Applications, Dynamic Memory Management, Implementation of Linked Representations. Trees: Definition, Representation of Trees, Types of Tree, Representation of Binary Trees, Binary Tree Traversals	04/09/23-16/09/23	**Test 1**
II	Threaded Binary Trees, Binary Search Trees and Operations, Minimum Spanning Tree, AVL Trees, Heap, m-way Search Trees, B-Trees, B+ Trees, Applications, Advanced Trees: Introduction to 2-3 Tree, Redblack Tree, Splay Trees. Graphs: Definitions and Basic Terminologies, Representation of Graphs, Graph Traversals, Shortest Path Problem, Applications.	18/09/23-30/09/23	
III	Introduction to Algorithms: Role of algorithms in computing, Complexity of algorithms, Analyzing algorithms, designing algorithms, asymptotic notations. Divide and Conquer: Complexity of iterative programs and recursive programs	03/10/23-14/10/23	**Assignment II**

III	Solving recurrence equations: back substitution method, recursion tree method, masters theorem. Analysis of heap sort and quick sort; Counting sort, Radix sort, Bucket sort, Lower bounds for sorting. Dynamic Programming (DP): Elements of DP, Matrix chain multiplication, Longest common subsequence, optimal binary search trees.	16/10/23-28/10/23	
IV	Greedy Techniques (GT): Elements of GT, Activity selection problem, Huffman codes, Knapsack Problem. Graph Algorithms: Single source shortest path: Analysis of Dijkstra's Algorithm, Limitations of Dijkstra's Algorithm, Negative weight cycle, Bellman-Ford algorithm. All Pairs Shortest Path:	30/10/23-11/11/23	**Test II**
IV	Relation of Shortest path and matrix multiplication, Analysis of Floyd Warshall algorithm. Maximum Flow: Flow network, FordFulkerson method. Computational complexity: Notion of Polynomial time algorithms, Complexity classes: P, NP, NP-Hard and NPComplete, Polynomial time verification, Reducibility, NP-Completeness.	13/11/23-25/11/23	
I, II, III and IV	Revision of Entire Syllabus.	27/11/23-05/12/23	**Test of Entire Syllabus**

Lesson Plan

Odd Semester (July-November, 2023)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- M.Sc.-3rd Sem Comp. Sc. (Software)

Subject Name and Code :-Advanced Database Systems

1.	24.07.2023-31.07.2023	Database System Concepts and Architecture: Three - Schema Architecture and Data Independence, ER Diagrams, Naming conventions and Design Issues. Relational Model Constraints and Relational Database Schemas.
2.	01.08.2023-15.08.2023	EER model: Subclasses, Super classes, Inheritance, Specialization and Generalization, Constraints and characteristics of specialization and Generalization.
3.	16.08.2023-30.08.2023	Overview of Object-Oriented concepts, Object identity, Object structure, Type constructors, Encapsulation of operations, Methods, and Persistence, Type hierarchies and Inheritance, Complex objects. **Assignment-1**
4.	01.09.2023-15.09.2023	Query Processing and Optimization: Using Heuristics in Query Optimization, Semantic Query Optimization, Database Tuning in Relational Systems. **Class Test**
5.	16.09.2023-30.09.2023	Architecture for parallel database; Distributed database concepts, Data fragmentation, Replication, and allocation techniques, Overview of Client-Server Architecture **Assignment-2**
6.	01.10.2023-15.10.2023	Active Database Concept and Triggers, Temporal Databases Concepts, Spatial and Multimedia Databases, Deductive Databases, XML Schema, Documents and Databases.
7.	16.10.2023-31.10.2023	Ontologies and Semantics: Classifications, The Simplest of Ontologies, Ontologies, Classes with Multiple Parents, Choosing a Class Model.
8.	01.11.2023-15.11.2023	Data Integration and Software Interoperability Versioning and Compliance Issues, Stepwise Approach to Big Data Analysis, Failures and Legalities.
9.	15.11.2023-24.11.2023	Revision & Problems Handling

Lesson Plan

Odd Semester (July-November, 2023)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- M.Sc.-3rd Sem Comp. Sc. (Software)

Subject Name and Code :- Advanced Database Systems (Lab)

1.	24.07.2023-31.07.2023	1. To Study the Basics of SQL with its components. 2. To Study the Data Types used in Oracle/SQL.
2.	01.08.2023-15.08.2023	1. Write SQL queries to implement DDL commands (CREATE TABLE, DROP TABLE and ALTER TABLE). 2. Write SQL queries to implement DML commands (INSERT, DELETE, UPDATE and SELECT).
3.	16.08.2023-30.08.2023	1. Write SQL Queries showing the use of operators in SQL. 2. Write SQL Queries using Group by and HAVING clause.
4.	01.09.2023-15.09.2023	1. Write SQL Queries for aggregate functions. 2. Write SQL Queries to create views (CREATE VIEW).
5.	16.09.2023-30.09.2023	1. Write SQL Query to implement the concept of Joins. 2. Write SQL Query to understand the concepts of ROLL BACK and COMMIT.
6.	01.10.2023-15.10.2023	1. To study the basics of PL/SQL with its features. 2. WAP to add two numbers using PL/SQL.
7.	16.10.2023-31.10.2023	1. WAP to check whether the number entered in even or odd using PL/SQL. 2. WAP to find greatest of two numbers using PL/SQL.
8.	01.11.2023-15.11.2023	1. WAP to find the sum of first N natural numbers using PL/SQL. 2. WAP to fetch the Salary of an EMPLOYEE whose EmpNo is entered by the user using PL/SQL.
9.	15.11.2023-24.11.2023	Revision & Problems Handling

Lesson Plan

Odd Semester (July-November, 2023)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- BCA-5th Sem

Subject Name and Code :- Programming using VB

1.	24.07.2023-31.07.2023	Introduction to VB: Visual & Non-Visual programming, Procedural, Object-Oriented, Object-Based and Event-Driven Programming Languages, VB as Even-Driven and Object-Based Language.
2.	01.08.2023-15.08.2023	VB Environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties Window, Form Designer, Form Layout, Immediate window, Default Controls in Tool Box Visual Development and Event Driven programming.
3.	16.08.2023-30.08.2023	Basics of Programming: Variables: Declaring Variables, Types of variables, Converting Variables Types, User Defined Data Types, Forcing Variable Declaration, Scope & Lifetime of Variables. Constants: Named & Intrinsic, Operators: Arithmetic, Relational & Logical operators, Input/output in VB: Various Controls for I/O, Message box, Input Box, Print statement. Program Development in VB such as Sum of Numbers etc. **Assignment-1**
4.	01.09.2023-15.09.2023	Decision Statements in VB - if statement, if-then-else, select-case etc. Program Development in VB such as Greatest among Numbers, Checking Even/Odd Number etc. **Class Test**
5.	16.09.2023-30.09.2023	Looping Statements in VB: do-loop, for-next, while-wend; Exit statement, Nested Control Structure. Program Development in VB such as HCF of Two Numbers, Generate Prime Numbers, Generate Fibonacci Series, Factorial of a Number etc. **Assignment-2**
6.	01.10.2023-15.10.2023	Arrays: Declaring and using Arrays, One-dimensional, Two-dimensional and Multi-dimensional Arrays, Static and Dynamic arrays, Array of Arrays. Program Development in VB such as Searching, Sorting, etc.
7.	16.10.2023-31.10.2023	Procedures: General & Event Procedures, Subroutines, Functions, Calling Procedures,
8.	01.11.2023-15.11.2023	Arguments - Passing Mechanisms, Optional Arguments, Named Arguments, Functions Returning Custom Data Types
9.	15.11.2023-24.11.2023	Revision & Problems Handling

Lesson Plan

Odd Semester (July-November, 2023)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- BCA-5thSem

Subject Name and Code :- Programming using VB (Lab)

1.	24.07.2023-31.07.2023	1. WAP to find the sum of two numbers 2. WAP to find the area of Circle
2.	01.08.2023-15.08.2023	1. WAP to find the larger number from two given numbers 2. WAP to check if a given number is Even or Odd 3. WAP to find the sum of first 10 natural numbers 4. WAP to find the mean of n numbers using Inputbox()
3.	16.08.2023-30.08.2023	1. WAP to check whether a given number is prime or not. 2. WAP to generate Prime Numbers upto n. 3. WAP to generate the Fibonacci Series upto n. 4. WAP to find the factorial of a number.
4.	01.09.2023-15.09.2023	1. WAP to check if a given number is palindrome 2. WAP to find the HCF and LCM of two numbers 3. WAP to illustrate the Login Screen in VB
5.	16.09.2023-30.09.2023	1. WAP to illustrate the Notepad using Textbox in VB 2. WAP for Temperature Conversion from Fahrenheit to Celsius using Scrollbar. 3. WAP to illustrate Stopwatch using Timer in VB
6.	01.10.2023-15.10.2023	1. WAP to find the largest among n numbers using 1-D arrays 2. WAP to implement bubble sortusing 1-D arrays 3. WAP to implement linear searchusing 1-D arrays
7.	16.10.2023-31.10.2023	1. WAP to find the sum of two matricesusing 2-D arrays 2. WAP to design a calculator using control arrays 3. WAP to calculate simple interest using procedure in VB
8.	01.11.2023-15.11.2023	1. WAP to calculate simple interest using function in VB 2. WAP to find the value of $^{n}C_{r}$
9.	15.11.2023-24.11.2023	Revision & Problems Handling

Lesson Plan

Odd Semester (July-November, 2023)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- BCA-3rdSem

Subject Name and Code :- Fundamentals of DBS

1.	24.07.2023-31.07.2023	Basic Concepts – Data, Information, Records and files. Traditional file – based Systems-File Based Approach-Limitations of File Based Approach.
2.	01.08.2023-15.08.2023	Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS,
3.	16.08.2023-30.08.2023	Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users, Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances, **Assignment-1**
4.	01.09.2023-15.09.2023	Data Independence – Logical and Physical Data Independence, Classification of Database Management System, Centralized and Client Server architecture to DBMS. **Class Test**
5.	16.09.2023-30.09.2023	Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling. **Assignment-2**
6.	01.10.2023-15.10.2023	Entity-Relationship Model – Entity Types, Entity Sets, Attributes Relationship Types, Relationship Instances and ER Diagrams.
7.	16.10.2023-31.10.2023	Relational Data Model:-Brief History, Terminology in Relational Data Structure, Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations,
8.	01.11.2023-15.11.2023	Base Tables and Views, Basic Concepts of Hierarchical and Network Data Model.
9.	15.11.2023-24.11.2023	Revision & Problems Handling

Note:-

The teaching of topics to the students on the dates/days mentioned in the above lesson plan may not be exactly followed and may have little variations/fluctuations because of some unforeseen circumstances. For example: various Functions/Activities organized by the College *(Musical Meet, Blood Donation, Important Days Celebrations, Co-Curricular/Extra-curricular Activities etc.*), Response of Students in the Class, Request of Students for Repetition of some specific Topics, Unpredicted Leaves, Restricted Holidays etc.

Students can ask any query on my E-Mail ID also

- **E-Mail: me.vishaalverma@gmail.com**

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : BCA Semester : IIIrd Subject : BCA – 232 DATA STRUCTURES

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff.	01 Aug to 15 Aug	
1	Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparce matrics.	15 Aug to 31 Aug	
2	Stack: Introduction, Array and linked representation of stacks, Operations on stacks, Applications of stacks: Polish notation, Recursion. Big-O notation. Strings: Introduction, String strings, String operations, Pattern matching algorithms.	01 Sep to 15 Sep	Assignment-1
2	Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues.	15 Sep to 30 Sep	Test-1
3	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithms for Insertion, deletion in array, Single linked list	01 Oct to 15 Oct	Test- 2
4	Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks and using recursion.	15 Oct to 31 Oct	Assignment-2

4	Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **B.Sc. CS** Semester : IIIrd Subject : Paper 1 (DATA STRUCTURES)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures.	01 Aug to 15 Aug	
1	Algorithms complexity and time-space tradeoff, Big-O notation. Strings: Introduction, strings, String operations, Pattern matching algorithms	15 Aug to 31 Aug	
2	Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparse matrix.	01 Sep to 15 Sep	
2	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithm of insertion/ deletion in SLL.	15 Sep to 30 Sep	Assignment-1
3	Stack: primitive operation on stack, algorithms for push and pop. Representation of Stack as Linked List and array, Stacks applications : polish notation, recursion. Introduction to queues, Primitive Operations on the Queues, Circular queue, Priority queue, Representation of Queues as Linked List and array, Applications of queue. Algorithm on insertion and deletion in simple queue and circular queue.	01 Oct to 15 Oct	Test- 1
4	Trees - Basic Terminology, representation, Binary Trees, Tree Representations using Array & Linked List, Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order, Applications of Binary tree. Algorithm of tree traversal with and without recursion.	15 Oct to 31 Oct	

4	Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **B.Sc. CS** Semester : IIIrd Subject : PAPER II: SOFWTARE ENGINEERING

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes.	01 Aug to 15 Aug	
1	Phases in Software development: Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics.	15 Aug to 31 Aug	
2	Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS, Characteristics of an SRS, Components of an SRS.	01 Sep to 15 Sep	
2	Problem Analysis, Information gathering tools, Organising and structuring information, Requirement specification, validation and metrics.	15 Sep to 30 Sep	Assignment-2
3	Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision trees, Structured English, Entity-Relationship diagrams .Software Project Planning: Cost estimation: COCOMO model.	01 Oct to 15 Oct	Test- 2
3	Project scheduling, Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management.	15 Oct to 31 Oct	

4	Software testing strategies: unit testing, integration testing, V and V , System testing, Alpha and Beta testing. Black box, white box testing. Cyclomatic Complexity.	01 Nov to 15 Nov	
4	Software Implementation and Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **PGDCA** Semester : NA Subject : **CS-DE-13 DATA STRUCTURES**

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Data Structures: Elementary data organization, Data structure operations, Algorithm complexity and time-space tradeoff, Classification of data structures.	01 Aug to 15 Aug	
1	String Processing: Storing strings, String operations, Pattern matching algorithms.	15 Aug to 31 Aug	
2	Arrays: Linear arrays, Operations on arrays, Multidimensional arrays, Storage of arrays, Matrices.	01 Sep to 15 Sep	
2	Linked Lists: Representation of linked list in memory, Traversal, Searching, Insertion, Deletion, Sorted Linked List, Header List,	15 Sep to 30 Sep	Assignment-1
3	Two – Way List; Stacks, Queues, Sparse Matrices.	01 Oct to 15 Oct	Test- 1
3	Linked and Array representation of Stacks.	15 Oct to 31 Oct	

4	Queues, and Dequeues, Priority Queues, Operations on stacks and queues.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **M.Sc. CS** Semester : **III rd Sem** Subject : MS-15-31 OOAD USING UML

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	UML: Principles of modeling, UML Things – Structural, Behavioral, Grouping, Annotational. Relationships in UML – Dependency, Association, Generalization, Realization.	01 Aug to 15 Aug	
1	Overview of diagrams in UML – Class diagram, Object diagram, Use-Case diagram, Sequence diagram, Collaboration diagram, Statechart diagram, Activity diagram, Component diagram, Deployment diagram. UML Semantic Rules – Names, Scope, Visibility, Integrity, Execution. Mechanisms in the UML – Specifications, Adornments, Common Divisions, Extensibility Mechanisms.	15 Aug to 31 Aug	
2	Modeling as a Design Technique: Abstraction, Encapsulation, Modularity, Hierarchy, Typing, Concurrency, Persistence of objects. Purpose of modeling, Class Model – Object & Class, Links & Associations, Generalization & Inheritance.	01 Sep to 15 Sep	
2	Association Ends - Multiplicity, Role names, Ordering, Qualification, Aggregation, Link attributes & Link class, Abstract class, Metadata, Constraints. Constructing class diagram.	15 Sep to 30 Sep	Assignment-1
3	State Modeling: Event, State, Activity, Action, Transitions & Conditions, State diagrams, Nested state diagrams, signal generalization, concurrency, relationships between class and state models. Interaction Modeling: use case models, use case relationships, sequence models, procedural sequence models, activity models, special constructs for activity models.	01 Oct to 15 Oct	Test- 1
4	System Analysis & design: System development stages, system conception, analysis, domain class model, domain state model, iterating the analysis. Application interaction model, application class model, application state model, adding operations	15 Oct to 31 Oct	

4	System Design: estimating performance, make a reuse plan, organize the system into subsystem, identifying concurrency, allocating subsystems to processors and tasks, management of data stores, handling global resources, choosing software control strategies, handling boundary conditions, setting trade-off priorities, selecting an architect style. Class Design: bridging gap, realize use cases with operations, designing algorithms, design optimization, adjustment of inheritance, organize classes & associations.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : BCA Semester : IIIrd Subject : BCA – 232 DATA STRUCTURES

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff.	01 Aug to 15 Aug	
1	Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparce matrics.	15 Aug to 31 Aug	
2	Stack: Introduction, Array and linked representation of stacks, Operations on stacks, Applications of stacks: Polish notation, Recursion. Big-O notation. Strings: Introduction, String strings, String operations, Pattern matching algorithms.	01 Sep to 15 Sep	Assignment-1
2	Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues.	15 Sep to 30 Sep	Test-1
3	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithms for Insertion, deletion in array, Single linked list	01 Oct to 15 Oct	Test- 2
4	Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks and using recursion.	15 Oct to 31 Oct	Assignment-2

4	Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **B.Sc. CS** Semester : IIIrd Subject : Paper 1 (DATA STRUCTURES)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures.	01 Aug to 15 Aug	
1	Algorithms complexity and time-space tradeoff, Big-O notation. Strings: Introduction, strings, String operations, Pattern matching algorithms	15 Aug to 31 Aug	
2	Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparse matrix.	01 Sep to 15 Sep	
2	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithm of insertion/ deletion in SLL.	15 Sep to 30 Sep	Assignment-1
3	Stack: primitive operation on stack, algorithms for push and pop. Representation of Stack as Linked List and array, Stacks applications : polish notation, recursion. Introduction to queues, Primitive Operations on the Queues, Circular queue, Priority queue, Representation of Queues as Linked List and array, Applications of queue. Algorithm on insertion and deletion in simple queue and circular queue.	01 Oct to 15 Oct	Test- 1
4	Trees - Basic Terminology, representation, Binary Trees, Tree Representations using Array & Linked List, Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order, Applications of Binary tree. Algorithm of tree traversal with and without recursion.	15 Oct to 31 Oct	

4	Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **B.Sc. CS** Semester : IIIrd Subject : PAPER II: SOFWTARE ENGINEERING

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes.	01 Aug to 15 Aug	
1	Phases in Software development: Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics.	15 Aug to 31 Aug	
2	Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS, Characteristics of an SRS, Components of an SRS.	01 Sep to 15 Sep	
2	Problem Analysis, Information gathering tools, Organising and structuring information, Requirement specification, validation and metrics.	15 Sep to 30 Sep	Assignment-2
3	Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision trees, Structured English, Entity-Relationship diagrams .Software Project Planning: Cost estimation: COCOMO model.	01 Oct to 15 Oct	Test- 2
3	Project scheduling, Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management.	15 Oct to 31 Oct	

4	Software testing strategies: unit testing, integration testing, V and V , System testing, Alpha and Beta testing. Black box, white box testing. Cyclomatic Complexity.	01 Nov to 15 Nov	
4	Software Implementation and Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **PGDCA** Semester : NA Subject : **CS-DE-13 DATA STRUCTURES**

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Data Structures: Elementary data organization, Data structure operations, Algorithm complexity and time-space tradeoff, Classification of data structures.	01 Aug to 15 Aug	
1	String Processing: Storing strings, String operations, Pattern matching algorithms.	15 Aug to 31 Aug	
2	Arrays: Linear arrays, Operations on arrays, Multidimensional arrays, Storage of arrays, Matrices.	01 Sep to 15 Sep	
2	Linked Lists: Representation of linked list in memory, Traversal, Searching, Insertion, Deletion, Sorted Linked List, Header List,	15 Sep to 30 Sep	Assignment-1
3	Two – Way List; Stacks, Queues, Sparse Matrices.	01 Oct to 15 Oct	Test- 1
3	Linked and Array representation of Stacks.	15 Oct to 31 Oct	

4	Queues, and Dequeues, Priority Queues, Operations on stacks and queues.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher : Mr. Dinesh Parkash Academic Session : *2023-24*

Class : **M.Sc. CS** Semester : **III rd Sem** Subject : MS-15-31 OOAD USING UML

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	UML: Principles of modeling, UML Things – Structural, Behavioral, Grouping, Annotational. Relationships in UML – Dependency, Association, Generalization, Realization.	01 Aug to 15 Aug	
1	Overview of diagrams in UML – Class diagram, Object diagram, Use-Case diagram, Sequence diagram, Collaboration diagram, Statechart diagram, Activity diagram, Component diagram, Deployment diagram. UML Semantic Rules – Names, Scope, Visibility, Integrity, Execution. Mechanisms in the UML – Specifications, Adornments, Common Divisions, Extensibility Mechanisms.	15 Aug to 31 Aug	
2	Modeling as a Design Technique: Abstraction, Encapsulation, Modularity, Hierarchy, Typing, Concurrency, Persistence of objects. Purpose of modeling, Class Model – Object & Class, Links & Associations, Generalization & Inheritance.	01 Sep to 15 Sep	
2	Association Ends - Multiplicity, Role names, Ordering, Qualification, Aggregation, Link attributes & Link class, Abstract class, Metadata, Constraints. Constructing class diagram.	15 Sep to 30 Sep	Assignment-1
3	State Modeling: Event, State, Activity, Action, Transitions & Conditions, State diagrams, Nested state diagrams, signal generalization, concurrency, relationships between class and state models. Interaction Modeling: use case models, use case relationships, sequence models, procedural sequence models, activity models, special constructs for activity models.	01 Oct to 15 Oct	Test- 1

4	System Analysis & design: System development stages, system conception, analysis, domain class model, domain state model, iterating the analysis. Application interaction model, application class model, application state model, adding operations	15 Oct to 31 Oct	
4	System Design: estimating performance, make a reuse plan, organize the system into subsystem, identifying concurrency, allocating subsystems to processors and tasks, management of data stores, handling global resources, choosing software control strategies, handling boundary conditions, setting trade-off priorities, selecting an architect style. Class Design: bridging gap, realize use cases with operations, designing algorithms, design optimization, adjustment of inheritance, organize classes & associations.	01 Nov to 15 Nov	
	Revision	15 Nov to 24 Nov	

Lesson Plan
Odd Semester (July –Nov 23)

Name of Teacher :- Dr. Navneet Garg

Class and Section :- BCA -1

Subject Name and Code :- Problem Solving through C and B23-CAP-101

1.	024 JulyAug to 15 Aug	Overview of C: History, Importance, Structure of C Program, Character Set, Constants and Variables, Identifiers and Keywords, Data Types, Assignment Statement, Symbolic Constant.
2.	15 Aug to 31 Aug	Input/output: Formatted I/O Function-, Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putch(), putchar(), puts().
3.	1 Sep to 15 Sep	Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment, Conditional Operators and Special Operators Operator Hierarchy; Arithmetic Expressions, Evaluation of Arithmetic Expression,
4.	16 Sep. to 30 Sept	Type Casting and Conversion. Decision making with if statement, ifelse statement, nested if statement, else-if ladder, switch and break statement, goto statement, Looping Statements: for, while, and do-while loop, jumps in loops.
5.	1 Oct to 15 Oct	Arrays: One Dimensional arrays - Declaration, Initialization and Memory representation; Two Dimensional arrays -Declaration, Initialization and Memory representation. Functions: definition, prototype, function call, passing arguments to a function: call by value; call by reference, recursive functions
6.	16 Oct to 31 Oct	Strings: Declaration and Initialization, String I/O, Array of Strings, String Manipulation Functions: String Length, Copy, Compare, Concatenate etc., Search for a Substring.
7.	1 Nov to 15 Nov	Pointers in C: Declaring and initializing pointers, accessing address and value of variables using pointers; Pointers and Arrays. User defined data types: Structures - Definition, Advantages of Structure, declaring structure variables, accessing structure members, Structure members initialization, Array of Structures; Unions - Union definition; difference between Structure and Union.
8.	16 Nov to Onwards	**Revision and Doubt**

Lesson Plan
Odd Semester (July –Nov 23)

Name of Teacher :- Dr. Navneet Garg

Class and Section :- BCA -1

Subject Name and Code :- Basic IT Tools and B23-SEC-103

1.	024 JulyAug to 15 Aug	Computer and Latest IT Gadgets, Evolution of Computer & its applications, Basic of Hardware and software, Application software, Systems Software, Utility Software,
2.	15 Aug to 31 Aug	Central Processing Unit, Input devices, Output devices, Computer Memory & storage, Mobile Apps. Functions of Operating System, Operating System for Desktop and Laptop,
3.	1 Sep to 15 Sep	Operating System for Mobile Phone and Tablets, User Interface for Desktop and Laptop, Task Bar, Icons & Shortcuts, Running an Application.
4.	16 Sep. to 30 Sept	Operating System Simple Setting, Changing system Date and Time, Removing & Sharing Printers, File and folder Manangement. Basic of Computer Networks, Local Area Network (LAN),
5.	1 Oct to 15 Oct	Wide Area Network (WAN), Network Topology, Inernet, Applications of Internet. Website Address and URL, Popular Web Browsers, Popular Search engines, Searching on the Internet.
6.	16 Oct to 31 Oct	Using E-mails, Opening Email account, Mailbox: Inbox and Outbox, Creating and sending a new E-mail, replying to an E- mail message, Forwarding an E-mai message.
7.	1 Nov to 15 Nov	Searching E-mails, Attaching files with E-mail, E-mail Signature, Social Networking: Facebook, Twitter, Linkedln, Instgram, Instant Message (WhatsApp, Facebook, Messenger, Telegram), Introduction to Blogs, Digital Locker.
8.	16 Nov to Onwards	**Revision and Doubt**

Lesson Plan
Odd Semester (July –Nov 23)

Name of Teacher :- Dr. Navneet Garg

Class and Section :- PGDCA

Subject Name and Code :- OPERATING SYSTEMS and CS-DE-15

1.	024 JulyAug to 15 Aug	Introductory Concepts: Operating system functions and characteristics, historical evolution of operating systems,
2.	15 Aug to 31 Aug	Real time systems, Distributed systems, O/S services, system calls, system programs.
3.	1 Sep to 15 Sep	CPU Scheduling: Process concept, Process scheduling, scheduling criteria, Scheduling algorithms.
4.	16 Sep. to 30 Sept	Deadlocks: Deadlock characterization, Deadlock prevention and avoidance, Deadlock detection and recovery.
5.	1 Oct to 15 Oct	Storage Management: Storage allocation methods: Single contiguous allocation, Multiple contiguous allocation, Paging; Segmentation, Virtual memory concepts,
6.	16 Oct to 31 Oct	Demand Paging, Page replacement Algorithms, Thrashing.
7.	1 Nov to 15 Nov	Test And Assignment
8.	16 Nov to Onwards	**Revision and Doubt**

Lesson Plan
Odd Semester (July –Nov 23)

Name of Teacher :- Dr. Navneet Garg

Class and Section :- MSc(Software)-3rd Semester

Subject Name and Code :- ADVANCED OPERATING SYSTEMS and MS-15-34

1.	024 JulyAug to 15 Aug	Introduction to Distributed Systems, Hard ware concepts, Software concepts, Design issues.
2.	15 Aug to 31 Aug	Communication in Distributed Systems, Lay red Protocols, ATM networks, The Client – sever model, Remote Procedure call, Group communication.
3.	1 Sep to 15 Sep	Synchronization in Distributed System, Clock Synchronization, Mutual Exclusion, Election algorithms, Atomic transactions, Deadlocks in Distributed Systems.
4.	16 Sep. to 30 Sept	Process and processors in Distributed System threads, System Models, Processors allocation, Scheduling in Distributed System, Fault tolerance, Real time Distributed System.
5.	1 Oct to 15 Oct	Distributed File Systems, Distributed File System Design, Distributed File System implementation, Trends in Distributed File System. Distributed Shared Memory, Introduction, What is Shared memory?,
6.	16 Oct to 31 Oct	Consistency models, Page based Distributed Shared memory, Shared – variable Distributed Shared memory, Object based Distributed Shared Memory.
7.	1 Nov to 15 Nov	REAL TIME AND MOBILE OPERATING SYSTEMS : Basic Model of Real Time Systems, Characteristics, Applications of Real Time Systems, Real Time Task Scheduling, Handling Resource Sharing, Mobile Operating Systems, Micro Kernel Design, Client Server Resource Access, Processes and Threads, Memory Management
8.	16 Nov to Onwards	**Revision and Doubt**

Note:-

The teaching of topics to the students on the dates/days mentioned in the above lesson plan may not be exactly followed and may have little variations/fluctuations because of some unforeseen circumstances. For example: various Functions/Activities organized by the College *(Musical Meet, Blood Donation, Important Days Celebrations, Co-Curricular/Extra-curricular Activities etc.*), Response of Students in the Class, Request of Students for Repetition of some specific Topics, Unpredicted Leaves, Restricted Holidays etc.

Students can ask any query on my E-Mail ID also

E-Mail: navneetgarg09@gmail.com

Lesson Plan
Even Semester (Feb.-May 2023)

Name of Teacher :- Dr.Mukul Sharma

Class and Section :- BCA IInd Sem

Subject Name and Code :- BCA-122 Logical Organization of Computers-II

1.	01 Feb to 15 Feb	Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK
2.	16 Feb to 28 Feb	T type and Master-Slave flip-flops. State table, state diagram. Flip-flop excitation tables
3.	01 March to 15 March	Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial Input Parallel Output (SIPO), Parallel Input Serial Output (PISO), Parallel Input Parallel Output(PIPO) and shift registers
4.	16 March to 31 March	Designing counters – Asynchronous and Synchronous Binary Counters, Modulo-N Counters and Up-Down Counters
5.	01 April to 15 April	Memory & I/O Devices: Memory Parameters, Semiconductor RAM, ROM
6.	16 April to 30 April	Magnetic and Optical Storage devices, Flash memory, I/O Devices and their controllers.
7.	01 May to 15 May	Instruction Design & I/O Organization: Machine instruction, Instruction set selection ,Instruction cycle, Instruction Format and Addressing Modes
8.	16 May to 26 May	I/O Interface, Interrupt structure, Program-controlled, Interrupt-controlled & DMA transfer, I/O Channels, IOP

Name of Teacher :- Dr.Mukul Sharma **Class and Section :- BCA 4th Sem** **Subject Name and Code :- BCA – 242 Advanced PROGRAMMING USING C++**		
1.	01 Feb to 15 Feb	Dynamic Polymorphism: Function Overriding, Virtual Function and its Need, Pure Virtual Function
2.	16 Feb to 28 Feb	Abstract Class, Virtual Derivation, Virtual Destructor
3.	01 March to 15 March	Type Conversion: Basic Type Conversion, Conversion between objects and basic types, Conversion between objects of different classes
4.	16 March to 31 March	Inheritance: Rules of Derivations – Private, Protected and Public Derivations
5.	01 April to 15 April	Different Forms of Inheritance – Single, Multiple, Multilevel, Hierarchical and Multipath Inheritance Roles of Constructors
6.	16 April to 30 April	Destructors in Inheritance, Genericity in C++: Templates in C++, Function templates
7.	01 May to 15 May	Class templates in C++, Exception Handling in C++: try, throw and catch, Files I/O in C++, Class Hierarchy for Files I/O, Text versus Binary Files
8.	16 May to 26 May	Opening and Closing Files, File Pointers, Operation on files

Lesson Plan
Even Semester (Feb.-May 2023)

Name of Teacher :- Dr. Mukul Sharma

Class and Section :- BSC (CS) 2nd Sem

Subject Name and Code :- Logical Organization of Computers

1.	01 Feb to 15 Feb	Number Systems, Binary Arithmetic, Fixed-point and Floating point representation of numbers, BCD Codes
2.	16 Feb to 28 Feb	Error detecting and correcting codes, Character Representation – ASCII, EBCDIC
3.	01 March to 15 March	Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions
4.	16 March to 31 March	Simplification of Boolean Functions –Venn Diagram, Karnaugh Maps
5.	01 April to 15 April	Digital Logic: Basic Gates – AND, OR, NOT, Universal Gates – NAND, NOR, Other Gates – XOR, XNOR
6.	16 April to 30 April	Combinational Circuits: Half-Adder, Full-Adder, Half-Subtractor, Full-Subtractor, Encoders,Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters.
7.	01 May to 15 May	Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type and Master-Slave flip-flops. State table, state diagram. Flip-flop excitation tables
8.	16 May to 26 May	Serial InputParallel Output (SIPO) Parallel Input Parallel Output (PIPO) Designing counters – Asynchronous and Synchronous Binary Counters, Modulo-N Counters and Up-Down Counters

Note:-

The teaching of topics to the students on the dates/days mentioned in the above lesson plan may not be exactly followed and may have little variations/fluctuations because of some unforeseen circumstances. For example: various Functions/Activities organized by the College *(Musical Meet, Blood Donation, Important Days Celebrations, Co-Curricular/Extra-curricular Activities etc.*), Response of Students in the Class, Request of Students for Repetition of some specific Topics, Unpredicted Leaves, Restricted Holidays etc.

Students can ask any query on my E-Mail ID also

- **E-Mail: mukulsharma6731@gmail.com**

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Amarpreet Singh Academic Session : 2023-24

Class : BCA Semester : 5th Subject : Computer Networks(BCA-354)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Data Communication & Computer Networks, Uses of Computer Networks, Types of Computer Networks (LAN,MAN & WAN), Difference, Types of Network Topology (Star, Bus, Mesh, Tree & Hybrid) Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways, Design issues,	01 Aug to 15 Aug	
1	Network Software, Protocols, Need of Protocol , Elements, Protocol Hierarchies, Connection Oriented and Connection Less Services, OSI Reference Model : Layers, Networking Models: Distributed Systems, Client/Server Model, (Two Tier/Three Tier), Peer-to-Peer Model, Web-Based Model and Emerging File-Sharing Model, Web-Based Model and Emerging File-Sharing Model	15 Aug to 31 Aug	
2	Introduction to Analog and Digital data and signals, Analog and Digital data and signals Bandwidth and Data Rate, Capacity, Baud Rate; Transmission Impairment; Data Rate Limits; Guided Transmission Media;	01 Sep to 15 Sep	Assignment-1
2	Wireless Transmission ; Communication Satellites; Switching, its types(Circuit/Message/Packet), Multiplexing & its types, Modulation & its types, Modems:-ADSL, Cable Modem	15 Sep to 30 Sep	Test-1
3	Data Link Layer Functions: Error detection/correction, Flow Control Algorithms.. Stop and Wait, Sliding Window Protocol, Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols	01 Oct to 15 Oct	Test- 2

3	Introduction to LAN technologies : Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet; Introduction to LAN technologies : Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet;	15 Oct to 31 Oct	Assignment-2
4	Routing Algorithms: Introduction, Classification of Routing Algo: adaptive and Non Adap, Distance Vector Routing, Flooding, Shortest Path Routing, Link State Routing, Hierarchical Routing, Congestion, Causes, General Principle of Congestion Control, Traffic shaping (Leaky Bucket), Token Bucket Traffic shaping (Leaky Bucket),Token Bucket	01 Nov to 15 Nov	
4	Elements of Transport Protocols, Difference Between TCP and UDP Network Security Issues Security Attacks and Issues, Encryption and Decryption Methods, Digital Signature, Digital Certificates	15 Nov to 24 Nov	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Amarpreet Singh Academic Session : 2023-24

Class : BCA Semester : IIIrd Subject : Computer Oriented Numerical Methods(BCA – 236)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: Computer Arithmetic, Fixed point representation of numbers, Floating-point representation of numbers, Addition/examples, Subtraction/examples, Multiplication/examples, Division/examples, Consequences of Normalized floating-point numbers, Concept of Zero in Floating Point, Errors in Number, Measurement of Errors, Measurement of Errors,	01 Aug to 15 Aug	
1	Differences: Forward and Backward, Effect of an error in a tabular value, Steps to locate and correct the error by Means of Differences, Introduction to Iterative Methods, Bisection Method/Problems, False position/Problems, Newton-Raphson method/Problems. discussion of convergence, Iteration method/Problems, Bairstow's method/Problems,	15 Aug to 31 Aug	
2	Introduction to Simultaneous linear equations and ordinary differential equations: Solution, Gauss-Elimination method, Ill-conditioned equations, Pivoting	01 Sep to 15 Sep	Assignment-1
2	Gauss-Seidal iterative method, Iterative Refinement of solution, Euler method, Euler modified method, Predictor-Corrector methods, Taylor-series method, Runge-Kutta methods	15 Sep to 30 Sep	Test-1
3	Interpolation and Approximation : Introduction, Differences :Forward and Backward, Polynomial interpolation, Newton Formula for Forward Interpolation/ Backward Interpolation, Unequal Differences, Divided Differences/table, Newton Divided Difference Formula, Lagranges, Difference tables,	01 Oct to 15 Oct	Test- 2

3	Diff. between Newton Divided Difference Formula and Lagranges Introduction: Approximation of functions by Taylor Series Chebyshev polynomial: First kind, Second kind and their relations, Orthogonal properties Problem, Chebyshev polynomial	15 Oct to 31 Oct	Assignment-2
4	Introduction to Numerical Differentiation and integration, Numerical Differentiation: Newton Forward Formula/ Problem, Newton Backward Formula/Problem, Bessel's Interpolation Formula/Problem,, Errors in Numerical Differentiation Numerical integration : Trapezoidal Rule/Problem	01 Nov to 15 Nov	
4	Error of the Trapezoidal Formula, Problem, Error of the Simpson Formula, Gaussian Quadrature Formula/Problems, & (REVISION)	15 Nov to 24 Nov	

Lesson Plan
Odd Semester (Aug.-Dec. 2023)

Name of Teacher :- Ms. Priya Rani

Class and Section :- B.A. 1st

Subject Name and Code :- Skill Enhancement Skill (SEC)

1.	24 July to 15 Aug	Unit- I Computer and Latest IT Gadgets, Evolution of Computer & its applications, Basic of Hardware and software, Application software, Systems Software, Utility Software, Central Processing Unit.
2.	15 Aug to 31 Aug	Input devices, Output devices, Computer Memory & storage, Mobile Apps. Unit- II Functions of Operating System, Operating System for Desktop and Laptop, Operating System for Mobile Phone and Tablets.
3.	01 Sep to 15 Sep	User Interface for Desktop and Laptop, Task Bar, Icons & Shortcuts, Running an Application, Operating System Simple Setting, Changing system Date and Time, Removing & Sharing Printers, File and folder Management.
4.	15 Sep to 30 Sep	Unit- III Basic of Computer Networks, Local Area Network (LAN), Wide Area Network (WAN), Network Topology, Internet, Applications of Internet.
5.	01 Oct to 15 Oct	Website Address and URL, Popular Web Browsers, Popular Search engines, Searching on the Internet. Unit- IV Using E-mails, Opening Email account, Mailbox: Inbox and Outbox.
6.	16 Oct to 31 Oct	Creating and sending a new E-mail, replying to an E- mail message, Forwarding an E-mai message Searching E-mails, Attaching files with E-mail, E-mail Signature,
7.	01 Nov to Onwards	Social Networking: Facebook, Twitter, Linkedln, Instgram, Instant Message (WhatsApp, Facebook, Messenger, Telegram), Introduction to Blogs, Digital Locker

Lesson Plan
Odd Semester (Aug.-Dec. 2023)

Name of Teacher :- Ms. Priya Rani

Class and Section :- B.A. 1st

Subject Name and Code :- Multi Disciplinary Course (MDC)

1.	24 July to 15 Aug	Computer Fundamentals: Evolution of Computers through generations, Characteristics of Computers, Strengths and Limitations of Computers, Classification of Computers, Functional Components of a Computer System
2.	15 Aug to 31 Aug	Applications of computers in Various Fields. Types of Software: System software, Application software, Utility Software. Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time.
3.	01 Sep to 15 Sep	concept of memory hierarchy, Primary Memory - RAM, ROM, PROM, EPROM. Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory. I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver.
4.	15 Sep to 30 Sep	Input Devices: classification and use, keyboard, pointing devices - mouse, touch pad and track ball, joystick, magnetic stripes, scanner, digital camera, and microphone Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter.
5.	01 Oct to 15 Oct	Introduction to Operating System: Definition, Functions, Features of Operating System, Icon, Folder, File, Start Button, Task Bar, Status Buttons, Folders, Shortcuts, Recycle Bin, Desktop, My Computer, My Document.
6.	16 Oct to 31 Oct	Windows Explorer, Control Panel The Internet: Introduction to networks and internet, history, Internet, Working of the Internet, Modes of Connecting to Internet.
7.	01 Nov to Onwards	Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords, e-mail addresses, message components, message composition, mailer features. Browsers and search engines.

Note:-

The teaching of topics to the students on the dates/days mentioned in the above lesson plan may not be exactly followed and may have little variations/fluctuations because of some unforeseen circumstances. For example: various Functions/Activities organized by the College *(Musical Meet, Blood Donation, Important Days Celebrations, Co-Curricular/Extra-curricular Activities etc.*), Response of Students in the Class, Request of Students for Repetition of some specific Topics, Unpredicted Leaves, Restricted Holidays etc. Students can ask any query on my E-Mail ID also

- **E-Mail: pkamaltanish@gmail.com**