Government College, Chhachhrauli

Summary of Lesson Plan Even Semester (Jan –April 2026)

Name of Teacher.Dr. Lakhvinder Singh Academic Session:*2025-26*

Class: B.Sc. Computer Science Semester:1st Subject:B23-CSE-201 Web Development

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents, Web Clients, Web Servers,	Jan 5 to Jan 15	
1	Web Browsers; Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools. Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, Steps For Developing website	Jan 16 to Jan 31	
2	Creating a Website and Introduction to Markup Languages (HTML and DHTML), HTML Document Features & Fundamentals, HTML Elements, Creating Links; Headers; Text styles; Text Structuring; Text colour and Background;	Feb 1 to Feb 15	
2	Formatting text; Page layouts, Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5.	Feb 16 to Feb 28	Assignment-1
3	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance,	March 9 to March 15	
3	Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3.	March 16 to March 31	Mid Term Exam
4	The Nature of JavaScript: Evolution of Scripting Languages, JavaScript Definition, Programming for Non-Programmers	April 1 to April 15	Assignment-2
4	Introduction to Client–Side Programming, Enhancing HTML Documents with JavaScript. Static and Dynamic web pages	April 16 to April 30	

Government College, Chhachhrauli

Summary of Lesson Plan Even Semester (Jan –April 2026)

Name of Teacher: Dr. Lakhvinder Singh Academic Session: *2025-26*

Class: M.Sc. Comp. Sc. (Software) Semester: 4th Subject:M24-CSE-413Research Ethics

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Research Ethics: Definition, need and importance of ethics in research; Scope and objectives of ethical research;	Jan 5 to Jan 15	
1	Research and society; Scientific temper and research culture; Core values – honesty, trust, fairness, accountability; Professionalism and responsibility in research	Jan 16 to Jan 31	
2	Misconduct in Research and Ethical Publishing: Research misconduct – fabrication, falsification, plagiarism; Ethical guidelines for authorship and publication;	Feb 1 to Feb 15	
2	Responsibilities of authors, reviewers, and editors; Conflict of interest; Retraction and correction of published work; Case studies on research misconduct	Feb 16 to Feb 28	Assignment-1
3	Ethical Issues in Computer Science Research: Data privacy and confidentiality; Cybersecurity ethics; Ethical use of AI and machine learning systems; Responsible innovation;	March 9 to March 15	
3	Open-source ethics; Software piracy and licensing; Intellectual property rights – copyrights, patents, trademarks in research	March 16 to March 31	Mid Term Exam
4	Institutional Frameworks and Case Studies: Institutional ethics committees and review boards; National and international guidelines – IEEE, ACM, UGC, DST, and CSIR ethics codes;	April 1 to April 15	Assignment-2
4	Ethical clearance procedures; Whistleblowing and protection; Case studies of ethical dilemmas and best practices in research ethics	April 16 to April 30	

Government College, Chhachhrauli

Summary of Lesson Plan Even Semester (Jan –April 2026)

Name of Teacher: Dr. Lakhvinder Singh Academic Session: *2025-26*

Class: B.C.A. I Semester: 2nd Sub:B23-CAP-202Introduction to Web Technologies

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents, Web Clients, Web Servers, Web Browsers; Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.	Jan 5 to Jan 15	
1	Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, Steps For Developing website	Jan 16 to Jan 31	
2	Creating a Website and Introduction to Markup Languages (HTML and DHTML), HTML Document Features & Fundamentals, HTML Elements, Creating Links; Headers; Text styles; Text Structuring; Text color and Background;	Feb 1 to Feb 15	
2	Formatting text; Page layouts, Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5	Feb 16 to Feb 28	Assignment-1
3	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance,	March 9 to March 15	
3	Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3.	March 16 to March 31	Mid Term Exam
4	The Nature of JavaScript: Evolution of Scripting Languages, JavaScript-Definition, Programming for Non-Programmers,	April 1 to April 15	Assignment-2
4	Introduction to Client–Side Programming, Enhancing HTML Documents with JavaScript. Static and Dynamic web pages	April 16 to April 30	

Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- M.Sc.-2nd Sem Comp. Sc. (Software)

Subject Name and Code :- Advanced Database Systems (M24-CSE-203)

1.	12.01.2026-31.01.2026	Database System Concepts and Architecture: DBMS Architecture and Data Independence Entity Relationship Model: Entity Types, Entity Sets, Attributes and Keys, Relationship Types & Instances, ER Diagrams, Design of an E-R Database Schema.
2.	01.02.2026-15.02.2026	The Enhanced Entity-Relationship (EER) model: Subclasses, Super classes, Inheritance, Specialization and Generalization SQL: Data Definition and Data Types, DDL, DML, and DCL, Views & Queries in SQL, Specifying Constraints & Indexes in SQL.
3.	16.02.2026-28.02.2026	PL/SQL: Architecture of PL/SQL, Basic elements of PL/SQL, PL/SQL Transactions Cursors and Triggers
4.	09.03.2026-15.03.2026	Relational Database Design: Functional Dependencies, Normal Forms based on Primary Keys (1NF, 2NF, 3NF, BCNF) **Assignment – 1**
5.	16.03.2026-31.03.2026	Multi-valued Dependencies, 4NF, Join Dependencies, 5NF, Domain-Key Normal Form Query Processing and Optimization, Transaction Processing: Introduction to Transaction Processing, Transaction and System Concepts, Desirable properties of Transaction **Class Test**
6.	01.04.2026-15.04.2026	Concurrency Control Techniques: Two-Phase Locking Techniques, Timestamp Ordering, Serializability Database Backup and Recovery: Recovery facilities, Recovery Techniques **Assignment – 2**
7.	16.04.2026-30.04.2026	Databases for Advanced Applications: Architecture for Parallel Database and Distributed Database, Active Database Concept and Triggers, Temporal Databases Concepts, Spatial and Multimedia Databases, Deductive Databases, Geographical Information System, Mobile Databases
8.	01.05.2026-05.05.2026	Web Databases, XML Schema, Object-Based Databases, OLTP Vs OLAP 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.

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Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- B.**Sc.-4thSem (Physical Sciences)**

Subject Name and Code :- Data Management with DBMS (B23-CSE-401)

1.	12.01.2026-31.01.2026	Basic Concepts: Data, Information, Records, Files, Schema and Instance etc. Limitations of File-Based Approach, Characteristics of Database Approach, Database Management System (DBMS), DBMS Functions and Components, Database Interfaces, Advantages and Disadvantages of DBMS. Database Users: Data and Database Administrator, Role and Responsibilities of Database Administrator, Database Designers, Application Developers etc.
2.	01.02.2026-15.02.2026	Database System Architecture: 1-Tier, 2-Tier & Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances, Data Independence – Logical and Physical Data Independence
3.	16.02.2026-28.02.2026	Data Models: Hierarchical, Network, and Relational Data Models. **Assignment – 1**
4.	09.03.2026-15.03.2026	Entity-Relationship Model: Entity, Entity Sets, Entity Type, Attributes: Type of Attributes, Keys, Integrity Constraints, Designing of ER Diagram, Symbolic Notations for Designing, ER Diagram
5.	16.03.2026-31.03.2026	SQL: Meaning, Purpose, and Need of SQL, Data Types, SQL Components: DDL, DML, DCL and DQL, Basic Queries, Join Operations and Sub-queries, Views, Specifying Indexes. Constraints and its Implementation in SQL. **Class Test**
6.	01.04.2026-15.04.2026	Relational Algebra: Basic Operations: Select, Project, Join, Union, Intersection, Difference, and Cartesian Product, etc. Relational Calculus: Tuple Relational and Domain Relational Calculus. Relational Algebra Vs. Relational Calculus. **Assignment – 2**
7.	16.04.2026-30.04.2026	Relational Model: Functional Dependency, Characteristics, Inference Rules for Functional Dependency, Types of Functional Dependency, Normalization: Benefits and Need of Normalization, Normal Forms Based on Primary Keys- (1NF, 2NF, 3NF, BCNF), Multi-valued Dependencies, 4 NF, Join dependencies, 5 NF, Domain Key Normal Form.
8.	01.05.2026-05.05.2026	Revision & Problems Handling

Note:-

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Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- B**CA-6thSem**

Subject Name and Code :- Internet and Web Designing (B23-VOC-330)

1.	12.01.2026-31.01.2026	Internet: Concept, Computer Networks, Internet, URL, (Uniform Resource Locator), Intranet, Extranet, URL, ISP, VPN; Application of Internet: World wide web, text-HTML, tags-net, surfing, Internet/Web, Web Browsing, Internet Addressing, IP Address, Domain Names, Search Engines, News Groups, Electronic mail, Web Portal, Chat, Video Conferencing, FTP, Remote Login, e-commerce, e-governance, e-banking
2.	01.02.2026-15.02.2026	HTML: HTML code for a web page- Web page basics, set-up a web page, display a web page in a web browser, start a new paragraph, start a new line, insert blank spaces, heading, pre-format text, comment, special characters, format text, emphasize superscript and subscript, font style and size, color, margins, monospaced font, block quote, lists-ordered list, unordered list, nested list, definition list; Images: Add an image, background image, border, wrap text around an image, aligning the image, horizontal rule, use images in list, convert an image to gif or jpeg
3.	16.02.2026-28.02.2026	Static web page development: Basics of HTML – What is Internet Language?, Understanding HTML, Create a web page, linking to other web pages **Assignment – 1**
4.	09.03.2026-15.03.2026	Publishing HTML pages, text alignment and lists, text formatting, fonts control, email links and link within a page, creating a table, creating HTML forms, creating web page graphics, putting graphics on a web page, custom backgrounds and colors, creating animated graphics
5.	16.03.2026-31.03.2026	Dynamic web page development: Cascading style sheets – CSS, defining style with HTML tags, features of style sheet, style properties, style classes and external style sheet; **Class Test**
6.	01.04.2026-15.04.2026	JavaScript: Introduction – Writing first java script, External JavaScript; **Assignment – 2**
7.	16.04.2026-30.04.2026	Variables: Rules for Variable names, declaring the variable, Assign a value to a variable, scope of variable, using operators, Control statements, JavaScript Loops;JavaScript Functions: Defining a Function, Returning value from function, user-define function
8.	01.05.2026-05.05.2026	Revision & Problems Handling

Note:-

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Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- M.Sc.-2nd Sem Comp. Sc. (Software)

Subject Name and Code :- Practical 4 (M24-CSE-206)

1.	12.01.2026-31.01.2026	• Design an ER Model for a University Database. Convert the ER diagram into relational schemas, including constraints like primary and foreign keys. • Write SQL queries to create tables for a Hospital database, defining data types, Constraints (e.g. NOT NULL, UNIQUE, CHECK) and indexes.
2.	01.02.2026-15.02.2026	• Develop SQL Queries to demonstrate CRUD operations (Create, Read, Update, Delete) on a Library database. Include advanced queries with JOIN, GROUP BY, HAVING and subqueries. • Create and Manage views in SQL for a Company Database. Demonstrate how to specify and enforce constraints like foreign keys and default values.
3.	16.02.2026-28.02.2026	• Write a PL/SQL program to handle a banking systems' transactions with features like deposit, withdrawal, and balance inquiry using Cursors. • Develop a trigger to automatically log changes in a student database whenever marks are updated.
4.	09.03.2026-15.03.2026	• Given an unnormalized relation for an Employee database, perform step-by-step normalization to convert it into 1NF, 2NF, 3NF, BCNF and 4NF.
5.	16.03.2026-31.03.2026	• Identify Functional Dependencies in a given Sales Database and use them to determine if the Schema satisfies BCNF. • Write SQL recursive queries to retrieve Hierarchical data from an organizational Chart database.
6.	01.04.2026-15.04.2026	• Implement a PL/SQL program to manage inventory for an e-commerce platform. Include triggers for automatic stock updates and procedures for order processing. • Write a program to simulate the Bully algorithm or Ring algorithm for leader election in a distributed system.
7.	16.04.2026-30.04.2026	• Write a program to implement vector clocks to maintain casual ordering of events in a distributed system.
8.	01.05.2026-05.05.2026	Revision & Problems Handling

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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.

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Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- B.**Sc.-4thSem (Physical Sciences)**

Subject Name and Code :- Data Management with DBMS (B23-CSE-401)

1.	12.01.2026-31.01.2026	• Write a SQL query for creating and describing a table of the salesman in a company. • Write a query to insert data into a table. • Write a SQL statement to display all the information of all salesmen.
2.	01.02.2026-15.02.2026	• Write a query that will retrieve the value of the salesman if of all salesman, getting orders from the customers in the orders table without any repeats. • Write a SQL statement to display the name and city of the salesman, who belongs to the city of Paris.
3.	16.02.2026-28.02.2026	• Write a SQL statement to display all the information for those customers with a grade of 200. • Write a SQL statement to delete a particular record from a table
4.	09.03.2026-15.03.2026	• Write an SQL statement that selects the highest grade for each of the cities of customers using the GROUP BY clause. • Write an SQL statement that selects the particular record using the ORDER BY clause.
5.	16.03.2026-31.03.2026	• Write a SQL statement to prepare a list with the salesman's name, the customer's name, and their cities for the salesman and customer who belong to the same city, • Write a SQL statement to know which salesman is working for which customers.
6.	01.04.2026-15.04.2026	• Write an SQL statement to create a view of the table. • Write an SQL statement to rename, update, and delete a view. • Write an SQL statement to update the record in a table. • Write a SQL statement to drop and truncate a table.
7.	16.04.2026-30.04.2026	• Understanding relational model concepts • Converting a table into various normal forms. • Understanding various concepts of databases
8.	01.05.2026-05.05.2026	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.**

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Lesson Plan
Even Semester (Jan-May, 2026)

Name of Teacher :- Dr. Vishal Verma

Class and Section :- BCA-6thSem

Subject Name and Code :- Internet and Web Designing (B23-VOC-330) Practical

1.	12.01.2026-31.01.2026	• Create a web page and web site using HTML
2.	01.02.2026-15.02.2026	• Publishing HTML pages
3.	16.02.2026-28.02.2026	• Create web page graphics and putting graphics on a web page
4.	09.03.2026-15.03.2026	• Create animated graphics using HTML
5.	16.03.2026-31.03.2026	• Developing static and dynamic web pages and web site using JavaScript
6.	01.04.2026-15.04.2026	• Developing static and dynamic web pages and web site using Cascade Style Sheet
7.	16.04.2026-30.04.2026	• Developing static and dynamic web pages and web site using External Style Sheet
8.	01.05.2026-05.05.2026	• 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.

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Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session: 2025-26

Class: M.Sc. Semester :IVSubject :Software Testing (M24-CSE-410)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Fundamentals of Software Testing :Software Testing Principles, objectives and types;Verification and Validation; Software Development Life Cycle (SDLC) vs. Software Testing Lifecycle (STLC);	12-01-26 20-01-26	
I	Testing methodologies; Black box testing, White Box Testing, Grey Box Testing, Static Testing Techniques: Reviews, Walkthroughs, Inspections	21-01-26 31-01-26	
I	Dynamic Testing Techniques: Functional and Non Functional Testing ; Levels of Testing: Unit Testing, Integration Testing, System Testing , Acceptance Testing	01-02-26 08-02-26	
II	Test Design and Execution: Test Planning, Test Strategiesand Test Documentation. Test Case Design Techyniques: Equivalence Partitionig, State Transition Testing, Use Case based Testingg, Boundary Value Analysis, Decision Table Based Testing	09-02-26 15-02-26	
II	Error guessing : Test Execution Process; Test Result Analysis; Test Automation Concepts and Tools; Introduction to Selenium, Junit, TestNG, and other testing frameworks	16-02-26 22-02-26	Test I
III	Software Quality and Performance Testing: Software Quality Assurance (SQA); ISO and CMMI Standards for Quality; Metrics for Software Testing; Defect Lifecycle and Defect Tracking Tools;	23-02-26 28-02-26	Assignment I
	HOLI Break	01-03-26 08-03-26	
III	Performance Testing: Load Testing, Stress Testing, Scalability Testing and Volume Testing	09-03-26 15-03-26	

III	**Tools for Performance testing : JMeter, LoadRunner;Security Testing Concepts and techniques;Usability Testing and its importance**	**16-03-26 22-03-26**	
IV	**Advanced Testing Techniques and Emerging Trends: Mutation Testing, Regression Testing**	**23-02-26 29-03-26**	
IV	**Configuration Testing, Compatibility Testing, Recovery Testing**	**30-03-26 05-04-26**	**Test II**
IV	**Testing in Agile and DevOpsenvironments; Continuous Integration and Continuous Testing;**	**06-04-26 12-04-26**	**Assignment II**
IV	**Cloud based Testing, AI and Machine Learning in Software Testing**	**13-04-26 19-04-26**	
	Revision Unit I and II	**20-04-26 26-04-26**	
	Revision Unit III and IV	**27-04-26 05-05-26**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session: 2025-26

Class: BCA Semester:VISubject:Basics of Data Science Using PythonB23-CAP-604

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	IntroductiontoDataScience:Definition,importance,andapplications. Overview of Python: Python programming basics, data types, and structures.	12-01-26 20-01-26	
I	Introduction to Python Libraries: NumPy, pandas, and matplotlib. Basic Data Manipulation: Reading and writing data files, basic operations with pandas DataFrame.	21-01-26 31-01-26	
II	DataImportandExport:HandlingCSV,Excel,andotherfileformats. Data Cleaning Techniques: Handling missing values, duplicates, and data inconsistencies.	01-02-26 08-02-26	
II	Data Transformation: Data type conversion, normalization, and scaling. Data Visualization: Creating and customizing plots using matplotlib and Seaborn.	09-02-26 15-02-26	Test I
III	Descriptive Statistics: Calculating mean, median, mode, standard deviation, and variance using pandas.	16-02-26 22-02-26	Assignment I
III	Inferential Statistics: Conducting hypothesis testing, t-tests, and chi-square tests.	23-02-26 28-02-26	
	HOLI Break	01-03-26 08-03-26	
III	Regression Analysis: Implementing simple linear regression and multiple regression using scikit-learn.	09-03-26 15-03-26	

III	**Predictive Modeling: Introduction to basic predictive models such as decision trees and logistic regression.**	**16-03-26 22-03-26**	
IV	**AdvancedPythonLibraries:Exploringadvancedpandas ,NumPy,and scikit-learn features.**	**23-02-26 29-03-26**	
IV	**Data Analysis Tools: Time series analysis, clustering, and classification using scikit-learn.**	**30-03-26 05-04-26**	**Test II**
IV	**What-If Analysis Tools: Sensitivity analysis and scenario analysis using Python.**	**06-04-26 12-04-26**	**Assignment II**
	Revision Unit I	**13-04-26 19-04-26**	
	Revision Unit II	**20-04-26 26-04-26**	
	Revision Unit III and IV	**27-04-26 05-05-26**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session: 2025-26

Class : BCA Semester : IV Subject :Software Testing

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Introduction: Definition of Software Testing and its Role, Terms: - Failure, Error, Fault, Defect, Bug, Goals of	12-01-26 20-01-26	
I	Testing, Principles of Testing, Software Testing Life Cycle, Verification and Validation: - V-testing Life cycle	21-01-26 31-01-26	
II	TypesofTesting: BlackBoxTesting:Overview:Whatis&When?Techniques: Boundary Value Analysis, Equivalence class testing,	01-02-26 08-02-26	
II	Decision Table White Box Testing:What is white box Testing, Need of white boxTesting, Classification , Structural : Coverage, Path testing	09-02-26 15-02-26	Test I
III	LevelsofTesting Unit Testing : Overview,Integration Testing : Overview,Techniques: Graph based & Path based, Functional	16-02-26 22-02-26	Assignment I
III	Testing, System Testing : Overview, Categories: Reliability Security Performance Recovery,	23-02-26 28-02-26	
	HOLI Break	01-03-26 08-03-26	
III	Acceptance Testing : Overview, Types of Acceptance Testing	09-03-26 15-03-26	

IV	**Test Planning: Preparing a Test plan, Scope management, DecideTest Approach**	**16-03-26 22-03-26**	
IV	**Setting Up Criteria, for testing, Identifying responsibilities, Staffing, training needs,**	**23-02-26 29-03-26**	**Test II**
IV	**Resource requirements, Test deliverables, Testing Tasks**	**30-03-26 05-04-26**	**Assignment II**
	Revision Unit I	**06-04-26 12-04-26**	
	Revision Unit II	**13-04-26 19-04-26**	
	Revision Unit III	**20-04-26 26-04-26**	
	Revision Unit IV	**27-04-26 05-05-26**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Mr. Dinesh Parkash **Academic Session : 2025-26**

Class : BCA **Semester : 4th** **Subject :** Data Structures and Applications (B23-CAP-401)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Data Structure Definition, Data Type vs. Data Structure, Classification of Data Structures, Data Structure Operations, Applications of Data Structures.	**12-01-26 20-01-26**	
I	Algorithm Specifications: Performance Analysis and Measurement (Time and Space Analysis of Algorithms-Average, Best and Worst Case Analysis). Arrays: Introduction, Linear Arrays, Representation of Linear Array in Memory,	**21-01-26 31-01-26**	
I	Two Dimensional and Multidimensional Arrays, Sparse Matrix and its Representation, Operations on Array: Algorithm for Traversal, Selection, Insertion, Deletion and its implementation.	**01-02-26 08-02-26**	
III	Stack: Array Representation of Stack, Linked List Representation of Stack, Algorithms for Push and Pop	**09-02-26 15-02-26**	
III	Application of Stack: Polish Notation, Postfix Evaluation Algorithms, Infix to Postfix Conversion, Infix to Prefix Conversion, Recursion.	**16-02-26 22-02-26**	
III	Introduction to Queues: Simple Queue, Double Ended Queue, Circular Queue, Priority Queue, Representation of Queues as Linked List and Array,	**23-02-26 28-02-26**	Assignment
	HOLI Break	**01-03-26 08-03-26**	
III	Applications of Queue. Algorithm on Insertion and Deletion in Simple Queue and Circular Queue. Priority Queues.	**09-03-26 15-03-26**	

II	String Handling: Storage of Strings, Operations on Strings viz., Length, Concatenation, Substring, Insertion, Deletion, Replacement, Pattern Matching	**16-03-26** **22-03-26**	Mid Term Exam
II	Linked List: Introduction, Array vs. linked list, Representation of linked lists in Memory	**23-02-26** **29-03-26**	Test
II	Traversing a Linked List, Insertion, Deletion, Searching into a Linked list, Type of Linked List.	**30-03-26** **05-04-26**	
IV	Tree: Definitions and Concepts, Representation of Binary Tree, Binary Tree Traversal (Inorder, postorder, preorder), Binary Search Trees – Definition, Operations viz., searching, insertions and deletion;	**06-04-26** **12-04-26**	
IV	Searching and Sorting Techniques, Sorting Techniques: Bubble sort, Merge sort	**13-04-26** **19-04-26**	
IV	Selection sort, Quick sort, Insertion Sort.	**20-04-26** **26-04-26**	
IV	Searching Techniques: Sequential Searching, Binary Searching.	**27-04-26** **05-05-26**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Mr. Dinesh Parkash **Academic Session : 2025-26**

Class : B.Sc.CS **Semester : 6th** **Subject :** Computer Networks (B23-CSE-601)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Introduction to Computer Networks: Overview of computer networks, types of networks (LAN, WAN, MAN), network topologies	**12-01-26 20-01-26**	
I	Network models (OSI and TCP/IP). Physical Layer: Data transmission methods, signal encoding techniques, transmission media	**21-01-26 31-01-26**	
I	Network devices (hubs, switches, routers).	**01-02-26 08-02-26**	
IV	Network Security: Fundamentals of network security, cryptography, firewalls	**09-02-26 15-02-26**	
IV	VPNs, and intrusion detection systems (IDS).	**16-02-26 22-02-26**	
IV	Wireless Networks: Wireless communication principles, Wi-Fi	**23-02-26 28-02-26**	Assignment
	HOLI Break	**01-03-26 08-03-26**	
IV	Bluetooth, mobile networks, and ad hoc networks.	**09-03-26 15-03-26**	
II	Data Link Layer: Error detection and correction, flow control	**16-03-26 22-03-26**	Mid Term Exam

II	MAC protocols, Ethernet, and switching.	**23-02-26** **29-03-26**	Test
II	Network Layer: IP addressing and subnetting, routing algorithms,	**30-03-26** **05-04-26**	
II	IPv4 vs. IPv6, and ARP	**06-04-26** **12-04-26**	
III	Transport Layer: Transport layer protocols (TCP, UDP)	**13-04-26** **19-04-26**	
III	Congestion control, and quality of service (QoS)	**20-04-26** **26-04-26**	
III	Application Layer: Application layer protocols (HTTP, FTP, DNS, SMTP), web services, and network applications.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher: Mr. Dinesh Parkash **Academic Session : 2025-26**

Class : M.Sc. C S (Software) **Semester : 4th Subject :** Cloud Computing and IoT (M24-CSE-407)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Cloud Computing: Definition and Characteristics of Cloud Computing, Evolution and Enabling Technologies, Benefits & Challenges, NIST Reference Architecture of Cloud Computing; Deployment Models	**12-01-26 20-01-26**	
I	Service Models, Service Oriented Architecture (SOA). Virtualization: Virtualization and Its Role in Cloud Computing; Benefits & Drawbacks of Virtualization	**21-01-26 31-01-26**	
I	Types of Virtualization, Server Virtualization, Hypervisor-Based Approaches, Virtualization Of - Operating System, Platform, CPU, Network, Application, Memory and I/O Devices.	**01-02-26 08-02-26**	
II	Cloud Computing Services & Applications: Cloud Computing Platforms; Compute Services, Storage Services, Database Services, Applications Services, Queuing Services	**09-02-26 15-02-26**	
II	E-Mail Services, Notification Services, Media Services, Content Delivery Services, Analytics Services	**16-02-26 22-02-26**	
II	Deployment& Management Services, Identity & Access Management Services and their Case Studies.	**23-02-26 28-02-26**	Assignment
	HOLI BREAK	**01-03-26 08-03-26**	
II	Cloud Security and Compliance: Security Challenges in The Cloud, Data Protection and Privacy, Compliance and Regulatory Issues.	**09-03-26 15-03-26**	
III	Internet of Thing (IoT): Definition and Characteristics of IoT, Key Components of IoT (Sensors, Actuators, Devices). IoT Ecosystems and Architecture	**16-03-26 22-03-26**	Mid Term Exam

III	Conceptual Framework, Common Applications of IoT. Modified OSI Model for IoT/M2M Systems, M2M Vs IoT	**23-02-26** **29-03-26**	Test
III	Iot Networking Technologies: NFC, RFID, Bluetooth BR/EDR and Bluetooth Low Energy, Zigbee, WiFi.	**30-03-26** **05-04-26**	
IV	Iot Communication Technologies & Security Issues: Constrained Nodes, Constrained Networks,	**06-04-26** **12-04-26**	
IV	Types of Constrained Devices, Low Power and Lossy Networks. Security Issues and Challenges in IoT.	**13-04-26** **19-04-26**	
IV	IoT Protocols – 6LoWPAN, QUIC Protocol; Data Protocols - MQTT, MQTT-SN, CoAP, AMQP.	**20-04-26** **26-04-26**	
IV	Introduction to Arduino and Raspberry Pi Boards.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher: Mr. Dinesh Parkash **Academic Session : 2025-26**

Class : PGDCA **Semester : 2nd Subject :** Computer Network (M24-CAP-202)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
I	Network Characterization: Goals and Applications; Categorization according to Size, Purpose, Design issues & Transmission Technologies; Network Architecture and Service Models; Design issues for the Layers; Reference Models: OSI and TCP/IP; Functions of layers and protocols of TCP/IP;	**12-01-26 20-01-26**	
I	Comparison of OSI & TCP/IP ; Data Transmission using TCP/IP; Networking Models & Applications: Centralized, Decentralized, and Distributed; Cli ent-Server and Peer-to-Peer; File sharing & Web- based; Content Distribution Networks; Introduction to Example Networks: The Internet and its Conceptual View ; Internet Services; Accessing The Internet; Connection-Oriented Networks: X.25, Frame Relay and ATM;	**21-01-26 31-01-26**	
II	Data Communication Concepts & Components: Digital and Analog Data and Signals, Asynchronous and Synchronous transmission; bit rate & baud, bandwidth & Channel Capacity; Nyquist Bit Rate, Shannon Capacity;	**01-02-26 08-02-26**	
II	Network Performance Parameters; Transmission Impairment; Connecting Devices & Transmission Media: Network Interface Cards, Connectors, Hubs, Transceivers & Media Connectors; Link-Layer Switches, Bridge, Routers, Gateways, Virtual LANs; Guided Transmission Media; Wireless transmission; Satellite communication;	**09-02-26 15-02-26**	
II	Data Encoding & Modulation Techniques: NRZ, NRZ-I, Manchester and Differential Manchester encoding; 4B/5B ; Pulse Code Modulation & Delta Modulation; Digital to Analog encoding; Switching and Bandwidth Utilization:	**16-02-26 22-02-26**	
II	Methods of Switching; Virtual Circuit & Datagram Networks; Multiplexing; Spread Spectrum; Wired Networks and the Local Loop: Telephone Networks; Modems; Broadband and ADSL; ADSL Versus Cable; Hybrid Fiber-Coaxial Network ; Fiber-to-the-Home	**23-02-26 28-02-26**	Assignment

	Broadband;		
	HOLI BREAK	**01-03-26** **08-03-26**	
III	Data Link Layer: Communication at the Data Link Layer; Nodes and Links; Link Layer Addressing; Examples of Data Link layer protocols; Design Issues: Framing techniques; Error Detection and Correction; Sliding Window Flow Control Protocols	**09-03-26** **15-03-26**	
III	Media Access Control: Random Access: Aloha, CSMA , CSMA/CD; Collision free protocols with Controlled Access	**16-03-26** **22-03-26**	Mid Term Exam
III	Wavelength Division Multiple access for Fiber-Optic Data Communication; IEEE LAN standards: Ethernet (Physical specifications, Encoding, Frame Format & MAC protocol); Binary Exponential Backoff algorithm	**23-02-26** **29-03-26**	Test
III	Introduction to Wireless Networks: IEEE 802.11 Wireless LAN; Wi-Max; Wireless LAN Protocol: MACA; Bluetooth and other wireless PAN technologies; Cellular Networks: Generations; GSM, CDMA, LTE.	**30-03-26** **05-04-26**	
IV	Transport layer : Addressing, Services and Protocols; TCP and UDP services & header formats; Network Layer : Services, Routing Algorithms: Shortest Path Routing, Flooding , Distance Vector Routing, Link State Routing, Hierarchical Routing, Multi Cast Routing, Routing for Mobile hosts.	**06-04-26** **12-04-26**	
IV	Network Layer in TCP/IP: Basic characteristics of IP protocol; addressing and header format of IPv4 ; IPv6; Congestion Control & Quality of Service: General Principals.	**13-04-26** **19-04-26**	
IV	Congestion control in Virtual – Circuit Subnets; Congestion Control in Datagram Subnets: Choke packets, Load Shedding; Random Early Detection, Jitter Control	**20-04-26** **26-04-26**	
IV	Over provisioning, Buffering, Traffic Shaping, Leaky Bucket, Token Bucket, Resource Reservation, Admission Control, Packet Scheduling;	**27-04-26** **05-05-26**	

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Summary of Lesson Plan(Even Sem)

Name of Teacher: Dr. Navneet Garg **Academic Session : 2025-26**

Class : BCA **Semester : II** **Subject :** Concepts of Operating Systems

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introductory Concepts: Operating System, Functions and Characteristics, Historical Evolution of Operating Systems, Operating System Structure.	**12-01-26 20-01-26**	
1	Types of Operating System: Real-time, Multiprogramming, Multiprocessing, Batch processing. Operating System Services, Operating System Interface, Service System Calls, and System Programs.	**21-01-26 31-01-26**	
1	Process Management: Process Concepts, Operations on Processes, Process States, and Process Control Block. Inter-Process Communication.	**01-02-26 08-02-26**	Assignment 1 &test
2	CPU Scheduling: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms, Multiple Processor Scheduling, Algorithm Evaluation.	**09-02-26 15-02-26**	
2	Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors. Deadlocks: Deadlock Characterization	**16-02-26 22-02-26**	
2	Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery.	**23-02-26 28-02-26**	Assignment 2 & Test
	HOLI Break	**01-03-26 08-03-26**	
3	Memory Management Strategies: Memory Management of Single-user and Multiuser Operating Systems, Partitioning,	**09-03-26 15-03-26**	

3	Swapping, Contiguous Memory Allocation, Paging and Segmentation;	**16-03-26** **22-03-26**	
3	Virtual Memory Management: Demand Paging, Page Replacement Algorithms, Thrashing.	**23-02-26** **05-04-26**	Assignment 3 & Test
4	Implementing File System: File System Structure, File System Implantation,	**06-04-26** **12-04-26**	
4	File Operations, Type of Files, Directory Implementation, Allocation Methods, and Free Space Management.	**13-04-26** **19-04-26**	
4	Disk Scheduling algorithm - SSTF, Scan, C- Scan, Look, C-Look. SSD Management.	**20-04-26** **26-04-26**	Assignment 4 & Test
4	Revision and Doubt..	**27-04-26** **05-05-26**	Test

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Summary of Lesson Plan(Even Sem)

Name of Teacher: Dr. Navneet Garg **Academic Session : 2025-26**

Class :BCA **Semester : VI** **Subject :** Programming using Python

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Python: Python Interpreter, Python as calculator, Python shell, Indentation, identifier and keywords, literals, strings	**12-01-26 20-01-26**	
1	Operators: Arithmetic, Relational, Logical, comparison, Bitwise, Assignment, Identity operator and Membership operator; Input & output statements;	**21-01-26 31-01-26**	
1	Control statements: Branching, looping, Conditional statement, Exit function	**01-02-26 08-02-26**	Assignment 1 &test
2	String Manipulations: Subscript operator, indexing, slicing a string, other functions on strings, string module. Strings and number system: Format functions,	**09-02-26 15-02-26**	
2	converting strings to numbers & Vice Versa. List, Tuples, Sets, Dictionaries: Basic list operators, replacing, inserting, removing an element, searching,	**16-02-26 22-02-26**	
2	Sorting lists, dictionary literals, adding & removing keys, accessing & replacing values, traversing dictionaries.	**23-02-26 28-02-26**	Assignment 1 &test
	HOLI Break	**01-03-26 08-03-26**	
3	Array in Python, Design with Functions: hiding redundancy, complexity, arguments & return values;,	**09-03-26 22-03-26**	

3	Formal/Actual arguments, named arguments, program structure and design, Recursive functions	**23-02-26** **29-03-26**	
3	scope & Global statements, Importing modules, Math modules & Random modules.	**30-03-26** **05-04-26**	Assignment 1 &test
4	Exception Handling: Exceptions, except clause, try and finally clause, user-defined exceptions.	**06-04-26** **12-04-26**	
4	File Handling: Manipulating files & directories, OS & SYS modules, Reading, writing text & numbers from/to file.	**13-04-26** **19-04-26**	
4	Graphics: "Turtle" module, drawing colors, shapes, digital images, image file formats.	**20-04-26** **26-04-26**	Assignment 1 &test
4	Revision and Test	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher: Dr. Mukul Sharma **Academic Session : 2025-26**

Class : PGDCA **Semester : II** **Subject :** Artificial Intelligence

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Definition, history, and evolution of AI, Strong AI vs. Weak AI, Applications of AI, Knowledge Representation using logic: Propositional logic.	**12-01-26 20-01-26**	
1	Syntax, semantics, truth tables, logical connectives, inference rules, Predicate logic: first-order logic, quantifiers.	**21-01-26 31-01-26**	
1	Predicates, clausal form and unification; Fuzzy logic: fuzzy sets, membership functions, fuzzy reasoning.	**01-02-26 08-02-26**	
2	Search Techniques: Problem formulation: state space representation, Uninformed Search Strategies: Breadth-First Search.	**09-02-26 15-02-26**	
2	Depth-First Search (DFS), Iterative Deepening DFS; Informed Search Strategies: Hill climbing, Best-first search, A* algorithm, admissibility.	**16-02-26 22-02-26**	
2	Monotonicity, and informedness, Search in Two-Player Games: Minimax algorithm, Alpha-Beta pruning.	**23-02-26 28-02-26**	
	HOLI Break	**01-03-26 08-03-26**	
3	Production Systems: rules, working memory, and control strategies, forward chaining and backward chaining.	**09-03-26 15-03-26**	

3	commutative and non-commutative production systems, Expert Systems: Definition and characteristics, Architecture, Applications.	**16-03-26** **22-03-26**	
3	Genetic Algorithms: Components of GAs: chromosomes, crossover, mutation, selection, replacement.	**23-02-26** **29-03-26**	
3	Fitness functions and evolution processes, GA vs. traditional problem solving techniques.	**30-03-26** **05-04-26**	
4	Machine Learning (ML): Definition and importance, Types: supervised, unsupervised, reinforcement learning.	**06-04-26** **12-04-26**	
4	Machine Learning (ML): Definition and importance, Types: supervised, unsupervised, reinforcement learning.	**13-04-26** **19-04-26**	
4	Introduction, perceptron, multilayer networks, back-propagation, Unsupervised Learning: Algorithms.	**20-04-26** **26-04-26**	
4	K-Means clustering, Hierarchical clustering, Principal Component Analysis.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher: Dr.Mukul Sharma **Academic Session : 2025-26**

Class :BCA **Semester : II** **Subject :** Object Oriented Programming using C++

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Input Output in C++: Unformatted and Formatted I/O Operations. I/O using insertion and extraction operators and streams in C++.	**12-01-26 20-01-26**	
1	Functions: Declaration and Definition, return values, arguments, passing parameters by value, call by reference.	**21-01-26 31-01-26**	
1	Call by pointer, Recursion, Inline Functions, Function overloading. Pointers, structures, and union in C++.	**01-02-26 08-02-26**	
2	Object-oriented features of C++: Class and Objects, Data hiding & encapsulation, abstraction, Data Members and Member Functions, accessing class members, empty class.	**09-02-26 15-02-26**	
2	Local class, global class, Scope Resolution Operator and its Uses, Static Data Members, Static Member Functions, Structure vs Class, Friend function and friend class.	**16-02-26 22-02-26**	
2	Constructors and Destructors: Constructors, Instantiation of objects, Default constructor, Parameterized constructor, Copy constructor and its use, Destructors, Dynamic initialization of objects.	**23-02-26 28-02-26**	
	HOLI Break	**01-03-26 08-03-26**	
3	Operator Overloading: Overloading unary and binary operators.	**09-03-26 15-03-26**	
3	Arithmetic operators, manipulation of strings using operators. Inheritance.	**16-03-26 22-03-26**	

3	Derived class, base class, Accessing the base class member, Inheritance: multilevel.	**23-02-26** **29-03-26**	
3	Multiple, hierarchical, hybrid; Virtual base class, Abstract class.	**30-03-26** **05-04-26**	
4	Virtual Functions, pure virtual functions.	**06-04-26** **12-04-26**	
4	Polymorphism & its types Exception Handling in C++: exception handling model.	**13-04-26** **19-04-26**	
4	Exception handling constructs - try, throw, catch.	**20-04-26** **26-04-26**	
4	Order of catch blocks, Catching all exceptions, Nested try blocks, handling uncaught exceptions.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher:Dr.Mukul Sharma **Academic Session : 2025-26**

Class : BCA **Semester : VI** **Subject :** Artificial Intelligence

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Artificial Intelligence (AI), Importance of AI, AI and its Related Field, AI Techniques.	**14-01-26 20-01-26**	
1	Criteria for success. Problem Space and Search: Problem as a State Space Search.	**21-01-26 31-01-26**	
1	Production System and its Characteristics, Issues in the Design of the Search Problem.	**01-02-26 08-02-26**	
2	Heuristic search techniques: Generate and test, hill climbing, best first search technique.	**09-02-26 15-02-26**	
2	Problem reduction, constraint satisfaction. Knowledge Representation: Definition and Importance of Knowledge.	**16-02-26 22-02-26**	
2	Knowledge Representation, Various Approaches Used in Knowledge Representation, Issues in Knowledge Representation.	**23-02-26 28-02-26**	
	HOLI Break	**01-03-26 08-03-26**	
3	Using Predicate Logic: Representing Simple Facts in Logic, Representing Instances and is-a Relationship.	**09-03-26 15-03-26**	
3	Computable Function and Predicate, Natural Language Processing.	**16-03-26 22-03-26**	

3	Introduction, Syntactic Processing, Semantic Processing.	**23-02-26** **29-03-26**	
3	Discourse and Pragmatic Processing.	**30-03-26** **05-04-26**	
4	Learning: Introduction to Learning, Rote Learning, Learning by Taking Advice.	**06-04-26** **12-04-26**	
4	Learning in Problem-Solving, Learning from Example Induction.	**13-04-26** **19-04-26**	
4	Explanation-Based Learning. Expert System Introduction	**20-04-26** **26-04-26**	
4	Representing Using Domain-Specific Knowledge, Expert System Shells.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name of Teacher: Dr. Mukul Sharma **Academic Session : 2025-26**

Class :B.Sc **Semester : II** **Subject :** Programming Methodologies

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Problem Solving: Understanding the problem, Analyzing the problem.	**12-01-26 20-01-26**	
1	Identifying the solution. Tools for Problem-Solving: Flowcharts and its Symbols.	**21-01-26 31-01-26**	
1	Algorithm designing. Examples of Algorithms with flow chart. Decision Table.	**01-02-26 08-02-26**	
2	Program: Concept of a program, Need for writing programs, Characteristics of a good program, Programming style, Documentation, and Program Maintenance.	**09-02-26 15-02-26**	
2	Debugging Programs: Syntax Errors, Run-Time Errors, Logical Errors.	**16-02-26 22-02-26**	
2	Process of conceptualizing a solution to a problem and moving from algorithm to programming.	**23-02-26 28-02-26**	
	HOLI Break	**01-03-26 08-03-26**	
3	General Concepts: Clarity and Simplicity of Expressions, Use of proper names for Identifiers.	**09-03-26 15-03-26**	
3	Comments, Indentation; and Documentation.	**16-03-26 22-03-26**	

3	Programming Constructs: Sequence, Selection, and Iteration; Simulation (dry run) of the program for better understanding of algorithm.	**23-02-26** **29-03-26**	
3	Comparison and Analysis of Algorithms through simulations.	**30-03-26** **05-04-26**	
4	Methodologies: Structured programming.	**06-04-26** **12-04-26**	
4	Top-down approach, Bottom-up approach.	**13-04-26** **19-04-26**	
4	Functional programming, Modular programming.	**20-04-26** **26-04-26**	
4	Object-oriented programming.	**27-04-26** **05-05-26**	

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Summary of Lesson Plan

Name: Dr. Bhawna Sharma

Academic Session: 2025-26.

Class: M.Sc-1st Sem **Subject :** Front-End Development, B23-CAP-402

Unit	Topic/Chapters to be Covered	Duration	Assignment and Tests
I	**Objects in Javascript**: Introduction to Objects, Type of Objects in Javascript, Creating Objects, Object Methods, Constructor Function, Prototype in Javascript, Inheritance using Prototyping Chain.	12.01.2026 – 25.01.2026	
I	**Regular Expressions:** Introduction to RegExp, Regular Expression Usage, Modifiers, RegExp Patterns, RegExp Methods, String Methods for RegExp, Type Conversion in Javascript	26.01.2026 – 06..02.2026	Assignment 1
II	**Event Handling:** Javascript Events, Event handler, Event Flow, Event Bubbling and Capturing, event Listeners, Event Types. **Document Object Model (DOM):** Introduction to DOM, Types of DOM, DOM Standards and Methods, Manipulating Documents using DOM, Handling Images. (Contd….)	07.02.2026 – 17.02.2026	
II	**Document Object Model (DOM):** Table Manipulation, Animation, Node and Node-list Handling.	18.02.2026 – 28.02.2026	Assignment 2
III	**Browser Objcet Model (BOM):** Introduction to BOM, DOM vs BOM, Window Object and Methods, BOM Navigator, BOM History, BOM Location, BOM Timer. (Contd..)	09.03.2026 – 19.03.2026	HOLI BREAK
III	(Contd..) **Browser Objcet Model (BOM):** Introduction to Cookies, Session and Persistent Cookies. **Form Handling:** Introduction to Forms, Forms Processing, Forms Object, Accessing Data from Forms, Form Validation, Additional Features in Forms, Validation APIs	20.03.2026 – 31.03.2026	

IV	**Introduction to jQuery:** jQuery Syntax, jQuery Selectors, jQuery Events, jQuery Effects, jQuery HTML, jQuery Traversing, jQuery AJAX, jQuery Misc.	01.04.2026 – 11.04.2026	
IV	(Contd..) **Introduction to jQuery:** jQuery Traversing, jQuery AJAX, jQuery Misc.	12.04.2026 – 22.04.2026	
	Revision and Tests	23.04.2026 – 05.05.2026	

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Summary of Lesson Plan

Name: Dr. Bhawna Sharma

Academic Session: 2025-26.

Class: BCA-6th Sem **Subject :** Advanced Web Development, B23-CAP-602

Unit	Topic/Chapters to be Covered	Duration	Assignment and Tests
I	**Advanced Front End Development:** Advanced HTML5 & CSS3: Semantic HTML, CSS Grid An Flexbox, CSS Preprocessors (Sass/LESS)	12.01.2026 – 25.01.2026	
I	**Javascript Es6+ :** Advanced Javascript Concepts (Promises, Async/Await), ES6+ Features (Arrow Functions, Template Literals, Desrtucting	26.01.2026 – 06..02.2026	Assignment 1
II	**Front-End Frameworks:** Introduction To React, Angular. Component-Based Architecture, State Management With Redux	07.02.2026 – 17.02.2026	
II	**Advanced Back-End Development: Server Side Programming:** Express.Js, GraphQL, Middleware, And Authentication (JWT, Oauth**)**	18.02.2026 – 28.02.2026	
III	**Database Management:** Advanced SQL Concepts, NoSQL Databse (Firebase), ORMs (Sequelize) **Full Stack Development:** Integrating Front-End and Back-End: Building a Full-Stack Application.	09.03.2026 – 19.03.2026	HOLI BREAK
III	**(Contd..)** **Full Stack Development:** Handling Asychronous Operations, Real Time Applications with WebSockets.	20.03.2026 – 31.03.2026	Assignment 2

IV	**Performance Optimization:** Code Splitting and Lazy Loading, Caching Strategies, Optimizing Images and Assests **Deployment and DevOps:** Deployment Strategies: CI/CD pipelines, Containerization with Docker,	01.04.2026 – 11.04.2026	
IV	**Deployment Platforms (Heroku, AWS, Netlify)** **DevOps and Monitoring:** Infrastructure as Code (Terraform, Ansible), Monitoring and Logging (Prometheus, Grafana)	12.04.2026 – 22.04.2026	
	Revision and Tests	23.04.2026 – 05.05.2026	

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Summary of Lesson Plan

Name: Dr. Bhawna Sharma

Academic Session: 2025-26.

Class: PGDCA-2nd Sem **Subject :** Server Side Web Technology, M24-CAP-201

Unit	Topic/Chapters to be Covered	Duration	Assignment and Tests
I	Introduction To Web Servers, Client Server Architecture, Request-Response Cycle, Server Side Vs. Client Side. Introduction To Node.Js: Overview Of Node.Js, Non Blocking I/O, Event-Driven Architecture,	12.01.2026 – 25.01.2026	
I	Installing Node.Js, Using Node Package Manager (Npm), Creating And Managing Packages. Modules: Working With core Modules, Creating And Importing Custom Modules, Require And Exports	26.01.2026 – 06..02.2026	Assignment 1
II	**File handling :** Reading From And Writing To Files, Handling Directories, Managing Asynchronous Tasks Efficiently. Building Web Servers: Creating A Basic Http Server, Handling Http Requests And Responses, Understanding Request Methods (GET, POST, PUT, DELETE).	07.02.2026 – 17.02.2026	
II	**Event driven programming:** Using Eventemitter, Creating Custom Events, Handling Real Time Data. Error Handling And Debugging: Try-Catch Blocks, Handling Asynchronous Errors, Using Debugging Tools (Eg. Node—Inspect, Chrome Devtools)	18.02.2026 – 28.02.2026	
III	**Expree.js Basics: Introduction to Express.js**., setting up express projects, understanding routing and middleware. Using templates engines (eg. EJS) for server-side rendering, Designing RESTful APIs, CRUD operations, Structuring API routes.	09.03.2026 – 19.03.2026	HOLI BREAK
III	(Contd..) Built-in middleware (eg. Body-Parser), Creating custom middleware, Error Handling Middleware. User authentication using JWT (JSON Web Tokens) and sessions	20.03.2026 – 31.03.2026	Assignment 2

IV	**Introduction to MongoDB:** NoSQL vs. SQL databases, Setting upMongoDB locally and on cloud (eg. MongoDB Atlas), Document based NoSQL database, JSON-like documents.	01.04.2026 – 11.04.2026	
IV	**Setting up MongoDB:** Installation, creating databases, collections and documents. CRUD operations in MongoDB: Creating and using indexes	12.04.2026 – 22.04.2026	
	Revision and Tests	23.04.2026 – 05.05.2026	

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Summary of Lesson Plan

Name of Teacher: Ms. Priya rani **Academic Session: 2025-26**

Class : BA 2nd Sem (SEC) **Subject : Cloud Computing**

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Concepts of Cloud Computing.	**12-01-26** **20-01-26**	
1	Computer Network Concepts of Distributed Systems.	**21-01-26** **31-01-26**	
1	Concepts of Cloud Computing and its Necessity.	**01-02-26** **08-02-26**	
2	Cloud Service Providers in use and their Significance.	**09-02-26** **15-02-26**	Assignment 1
2	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models.	**16-02-26** **22-02-26**	
2	Cloud Deployment Models.	**23-02-26** **28-02-26**	
	HOLI Break	**01-03-26** **08-03-26**	
3	Cloud Storage Management Concept of Virtualization and Load Balancing.	**09-03-26** **15-03-26**	Assignment 2
3	Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information.	**16-03-26** **22-03-26**	

3	Identifying the problems of scale and management in big data.	**23-02-26** **29-03-26**	
3	Building Cloud Networks Designing.	**30-03-26** **05-04-26**	
4	And Implementing a Data Center-Based Cloud.	**06-04-26** **12-04-26**	
4	Installing Open Source Cloud service.	**13-04-26** **19-04-26**	
4	Revision	**20-04-26** **26-04-26**	
4	Revision	**27-04-26** **05-05-26**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Ms. Priya rani **Academic Session: 2025-26**

Class : BA 2nd Sem (MDC) **Subject : Web Technology**

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW);	**12-01-26** **20-01-26**	
1	Evolution and History of World Wide Web, Web Pages and Contents.	**21-01-26** **31-01-26**	
1	Web Clients, Web Servers, Web Browsers Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.	**01-02-26** **08-02-26**	
2	Web Publishing: Hosting website; Internet Service Provider.	**09-02-26** **15-02-26**	Assignment 1
2	Planning and designing website; Web Graphics Design.	**16-02-26** **22-02-26**	
2	Steps for Developing website Creating a Website and Introduction to Markup Languages (HTML and DHTML).	**23-02-26** **28-02-26**	
	Holi Break	**01-03-26** **08-03-26**	
3	HTML Document Features & Fundamentals, HTML Elements.	**09-03-26** **15-03-26**	Assignment 2
3	Creating Links; Headers; Text styles; Text Structuring; Text colour and Background; Formatting text; Page layouts, Images.	**16-03-26** **22-03-26**	

3	Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts.	**23-02-26** **29-03-26**	
3	Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5.	**30-03-26** **05-04-26**	
4	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax.	**06-04-26** **12-04-26**	
4	Types, Style Sheets and HTML, Style Rule Cascading and Inheritance	**13-04-26** **19-04-26**	
4	Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3.	**20-04-26** **26-04-26**	
4	Introduction to Client–Side Programming. **Revision**	**27-04-26** **05-05-26**	