

Lesson Plan

Course: Web Development Semester -II

Feb 8 - Feb 14: Introduction to Internet and Web Technologies

- Overview of Internet and WWW
- Web Clients, Servers, and Browsers

Feb 15 - Feb 21:

- Web Technologies Continued
- Hypertext Transfer Protocol (HTTP) and URLs
- Search Engines and Web Publishing

Feb 22 - Feb 28:

- HTML & DHTML Basics
- Structure of HTML Documents
- HTML Elements: Links, Headers, Text Styles, Images, and Lists

Mar 1 - Mar 7:

- Advanced HTML
- Tables, Frames, Forms, and Menus
- Introduction to HTML5

Mar 17 - Mar 23:

- CSS and Styling Basics
- Introduction to CSS
- Selectors, Box Model, and Positioning

Mar 24 - Mar 30:

- Advanced CSS
- Styling text and backgrounds
- Features of CSS3

Mar 31 - Apr 6:

- JavaScript and Client-Side Programming
- Introduction to JavaScript
- Data types, Operators, and Functions

Apr 7 - Apr 13:

- JavaScript Continued
- Event Handling and DOM Manipulation
- Creating dynamic web pages

Apr 14 - Apr 20:

- Practical Web Projects
- Designing a personal blog website
- Implementing interactive forms

Apr 21: Class Test

- Assessment covering topics from Web Development, Programming Methodologies, and DBMS

Apr 22 - Apr 27:

- Web Project Implementation
- Creating a college records table
- Adding animations and effects

Apr 28 - May 4:

- Advanced Web Development
- Responsive Web Design
- Introduction to Frameworks (Bootstrap, Tailwind CSS)

May 5 - May 11:

- Full-Stack Web Development Basics
- Introduction to Frontend and Backend Integration
- Overview of Web Hosting and Deployment

May 12 - May 18:

- Final Project Development
- Developing and Testing a Full Website

May 19 - May 31: Revision

Lesson Plan
Course: Programming Methodologies
Semester-II

Feb 8 - Feb 14:

- Problem Solving Techniques
- Understanding problems and solutions
- Introduction to algorithms and flowcharts

Feb 15 - Feb 21:

- Decision and Control Structures
- Decision Tables and Simulation
- Translating algorithms into programs

Feb 22 - Feb 28:

- Programming Basics
- Concept of Programs and Debugging
- Errors: Syntax, Logical, and Run-Time

Mar 1 - Mar 7:

- Programming Constructs
- Sequence, Selection, and Iteration structures
- Simulations for algorithm understanding

Mar 17 - Mar 23:

- Advanced Programming Constructs
- Algorithm comparisons
- Introduction to Data Structures

Mar 24 - Mar 30:

- Programming Methodologies
- Structured, Modular, and Object-Oriented Programming

Mar 31 - Apr 6:

- Advanced Programming Methodologies
- Top-down vs. Bottom-up Approach
- Functional Programming Overview

Apr 7 - Apr 13:

- Practical Implementation
- Flowcharts and algorithms for simple problems

Apr 14 - Apr 20:

- System Requirement Analysis
- Identifying system requirements for college and banking systems

Apr 21: Class Test

- Assessment covering topics from Web Development, Programming Methodologies, and DBMS

Apr 22 - Apr 27:

- Conditional Problem Solving

- Decision tables for conditional problem-solving

Apr 28 - May 4:

- Algorithm Optimization
- Analyzing and improving existing algorithms

May 5 - May 11:

- Software Development Life Cycle
- Understanding various software development models

May 12 - May 18:

- Final Project Development
- Implementing real-world problem-solving techniques

May 19 - May 31: Revision

Lesson Plan
Course: Data Management with DBMS
Semester-IV

Feb 8 - Feb 14: Introduction to Databases

- Database Concepts: Data, Information, Schema
- Characteristics of DBMS and its advantages

Feb 15 - Feb 21: DBMS Components and Functions

- DBMS Functions and Components
- Database Users and Roles

Feb 22 - Feb 28: Data Models and ER Diagrams

- Hierarchical, Network, and Relational Data Models

Mar 1 - Mar 7: ER Modeling Techniques

- Entity-Relationship (ER) Model and Integrity Constraints
- ER Diagram Design and Notations

Mar 17 - Mar 23: SQL Fundamentals

- DDL, DML, DCL, and DQL
- Writing basic SQL queries

Mar 24 - Mar 30: SQL Queries and Joins

- Joins, Subqueries, and Views

Mar 31 - Apr 6: Relational Algebra and Normalization

- Basic Relational Algebra operations

Apr 7 - Apr 13: Advanced Normalization

- Tuple and Domain Relational Calculus
- Normalization: 1NF, 2NF, 3NF, BCNF, and beyond

Apr 14 - Apr 20: Advanced SQL

- SQL Constraints, Indexing, and Stored Procedures

Apr 21: Class Test

- Assessment covering topics from Web Development, Programming Methodologies, and DBMS

Apr 22 - Apr 27: DBMS Project Implementation

- Writing optimized SQL queries
- Database design and implementation project

Apr 28 - May 4: Database Administration

- Backup, Recovery, and Security

May 5 - May 11: Advanced Database Concepts

- Data Warehousing and Big Data Introduction

May 12 - May 18: Final Project Development

- Designing and Implementing a Comprehensive Database System

May 19 - May 31: Revision