

**PT. C.L.S. GOVT. COLLEGE, KARNAL**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**LESSON PLAN**

**Name: Ms.Poonam sharma**

**Subject -Software engineering**

**Class : BCA**

**Course Code: B23-CAP-501**

**Semester: 5<sup>th</sup>Sem.**

Week	Date	Topics To Be Covered
1	22-07-2025 to 26-07-2025	Unit-I Introduction: Program vs. Software, Software Engineering,
2	28-07-2025 to 02-08-2025	Programming paradigms, Software Crisis – problem and causes
3	04-08-2025 to 09-08-2025	Phases in Software development: Requirement Analysis, Software Design,
4	11-08-2025 to 16-08-2025	Coding, Testing, Maintenance
5	18-08-2025 to 23-08-2025	Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics.
6	25-08-2025 to 30-08-2025	Unit-II Feasibility Study, Software Requirement Analysis and Specifications:
7	01-09-2025 to 06-09-2025	SRS, Need for SRS, Characteristics of an SRS, Components of an SRS
8	08-09-2025 to 13-09-2025	Problem Analysis, Information gathering tools
9	15-09-2025 to 20-09-2025	Requirement specification, validation and metrics.
10	22-09-2025 to 27-09-2025	Structured Analysis and Tools: Data Flow Diagram, Data Dictionary,
11	29-09-2025 to 04-10-2025	Decision table, Decision trees, Structured English,
12	06-10-2025 to 11-10-2025	Entity-Relationship diagrams
13	13-10-2025 to 18-10-2025	Unit-III Software Project Planning: Cost estimation: COCOMO model
14	19-10-2025 to 26-10-2025	<b>DIWALI VACATIONS</b>
15	27-10-2025 to 01-11-2025	Project scheduling, Staffing, and personnel planning, team structure
16	03-11-2025 to 08-11-2025	Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management.

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17	10-11-2025 to 15-11-2025	Software Design: Design fundamentals, problem partitioning, and abstraction, design methodology, Cohesion & Coupling.
18	17-11-2025 to 24-11-2025	Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing. Software Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance Characteristics

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**Name: Ms. Poonam sharma**

**Subject: Back-End Development**

**Class : BCA**

**Course Code: B23-CAP-502**

**Semester 5<sup>th</sup> sem.**

Week	Date	Topics To Be Covered
1	22-07-2025 to 26-07-2025	Unit-I Introduction to back-end Development: Overview of backend
2	28-07-2025 to 02-08-2025	Client-server architecture,
3	04-08-2025 to 09-08-2025	Introduction to web servers and database
4	11-08-2025 to 16-08-2025	Unit-II Programming Languages and Tools: Introduction to server-side languages (e.g., Node.js)
5	18-08-2025 to 23-08-2025	Syntax and semantics of chosen server-side language
6	25-08-2025 to 30-08-2025	Programming Languages: Version control with Git, Introduction to IDEs (Integrated Development Environments)
7	01-09-2025 to 06-09-2025	IDEs of chosen language, Writing and executing basic server-side scripts
8	08-09-2025 to 13-09-2025	Performance Optimization and Security: Caching strategies, Query optimization
9	15-09-2025 to 20-09-2025	Unit-III Database Management: Introduction to databases and DBMS (SQL and NoSQL),
10	22-09-2025 to 27-09-2025	Designing a database schema
11	29-09-2025 to 04-10-2025	CRUD operations (Create, Read, Update, Delete),
12	06-10-2025 to 11-10-2025	Connecting applications to a database
13	13-10-2025 to 18-10-2025	Revision
14	19-10-2025 to 26-10-2025	<b>DIWALI VACATIONS</b>
15	27-10-2025 to 01-11-2025	Unit-IV Server-Side Frameworks: Overview of popular server-side frameworks (e.g., Express.js),

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16	03-11-2025 to 08-11-2025	Building a simple application using a framework.
17	10-11-2025 to 15-11-2025	API Development: RESTful API concepts, Designing and documenting APIs
18	17-11-2025 to 24-11-2025	Authentication and authorization basics Web security best practices (SQL injection,XSS,CRCF.