

Lesson Plan

Name of Faculty : Sonam Bajaj, Assistant Professor of CSE
Discipline : Computer Science and Engineering
Semester : 4th (EVEN)
Subject : Software Eng. (PC/CSE/45-T)
Lesson Plan Duration : 15 weeks (from March to June2025)
Work Load (Lecture/Practical) per week (in hours): Lectures-03hours.

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 st	1	Software Crisis, Software Process, Evolution of Software Engineering			
	2	Software Characteristics, Software Metrics and SDLC			
	3	Software Life Cycle Models: Water Fall Model, Increment Process Model			
2 nd	4	Evolutionary Process Models, Unified Process. Selection of Life Cycle Model.			
	5	Software Requirements, Analysis and Specifications: Requirement Engineering, Requirements Elicitation			
	6	Requirements Analysis: Data Flow Diagram, Data Dictionary,			
3 rd	7	Entity- Relationship Diagrams, Decision Table, Decision Tree and Structured Charts.			
	8	Requirements Documentation and Requirements validation.			
	9	Software Project Management: Size Estimation, Cost Estimation			
4 th	10	Assignment 1st			
	11	Constructive Cost Model (COCOMO), Putnam Resource Allocation Model.			
	12	Software Risk Management: Software Risks, Risk Identification			
5 th	13	Risk Mitigation, Monitoring, and Management, RMMM Plan..			
	14	Software Design: Software Design Fundamentals			
	15	Design Principles, Strategy of Design			
6 th	16	Function Oriented Design, and Object-Oriented Design			
	17	IEEE Recommended Practice for Software Design Descriptions			
	18	Software Quality: Basic Concepts, ISO 9126, McCall's Quality Factors			
7 th		1st Minor Test			
8 th	19	Software Quality Assurance, SQA Activities			
	20	ISO 9000 Quality Standards, and CMM			
	21	REVISION			
9 th	22	Software Testing: Testing fundamentals			
	23	Verification and Validation			
	24	Test Plan, Test Case			
10 th	25	Assignment 2nd			
	26	Levels of Software Testing: Unit Testing			
	27	Integration Testing, Top Down and Bottom-up Testing			
11 th	28	Alpha and Beta Testing			
	29	System Testing			
	30	White Box Testing			
12 th	31	Black Box Testing			
	32	Debugging and Software Testing Tools.Maintenance.			
	33	Reengineering: Software Maintenance			
13 th	34	Software Supportability			
	35	Reengineering			
	36	Business Process Reengineering			
14 th		2nd Minor Test			
15 th	37	Software Reengineering			
	38	Reverse Engineering			
	39	Restructuring, Forward Engineering			