C. V. RAMAN POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Discipline:	Computer Science & Engineering	**Semester:**	5th
Subject:	Software Engineering	**Name of the Teaching Faculty:**	Kshyamasagar Mahanta
No. of Days/per week class allotted:	4	**Semester From date:**	14/07/2025
No. of Weeks:	15	**To Date:**	15/11/2025

Week	Class Day	Topics
1st	1st	Introduction to Software Engineering. Program vs. Software product
	2nd	Emergence of Software Engineering
	3rd	Computer Systems Engineering
	4th	Software Life Cycle Models Classical Water fall model
2nd	1st	Iterative Water fall model Prototyping model
	2nd	Evolutionary model Spiral model
	3rd	Revision and Test
	4th	Responsibility of Project Manager
3rd	1st	Project Planning
	2nd	Metrics for Project size estimation(LOC and FP)
	3rd	Project Estimation Techniques
	4th	COCOMO Models, Basic, Intermediate and complete
4th	1st	COCOMO Models, Basic, Intermediate and complete
	2nd	Scheduling
	3rd	Organization and Team structure
	4th	Staffing
	1st	Risk Management
	2nd	Configuration Management

5th	3rd	Requirements gathering and analysis
	4th	Requirements gathering and analysis
6th	1st	Software Requirements Specification , Contents of SRS
	2nd	Characteristics of Good SRS
	3rd	Organization of SRS
	4th	Techniques for representing complexing logic
7th	1st	What is a Good S/W design
	2nd	Cohesion and coupling
	3rd	Cohesion and coupling
	4th	Neat arrangement
8th	1st	S/W Design approaches
	2nd	Structured analysis
	3rd	Data FlowDiagrams
	4th	Symbols used in DFD
9th	1st	Designing DFD
	2nd	Developing DFD model of a system
	3rd	Developing DFD model of a system
	4th	Shortcomings of DFD
10th	1st	Structured design
	2nd	Principles of transformation of DFD to Structure Chart
	3rd	Transform analysis and Transaction Analysis
	4th	Design Review
11th	1st	Characteristics of Good Interface
	2nd	Basic concepts of UID
	3rd	Types of User interfaces
	4th	Components based GUI development
12th	1st	Components based GUI development
	2nd	Revision and Test
	3rd	Coding , Code Review
	4th	Code walk through
13th	1st	Code inspections
	2nd	Software Documentation
	3rd	Testing Unit testing
	4th	Black Box Testing
	1st	Equivalence class partitioning and boundary value analysis

14th	2nd	White Box Testing Different White Box methodologies statement coverage branch coverage, condition coverage, path coverage
	3rd	Cyclomatic complexity data flow based testing and mutation testing
	4th	Debugging approaches, guidelines, Phased and incremental integration testing
15th	1st	System testing alphas beta and acceptance testing Performance Testing, Error seeding ,General issues associated with testing
	2nd	Software Reliability Different reliability metrics
	3rd	Reliability growth modeling Software quality, Software Quality Management System
	4th	Revision

Signature of Faculty

Signature of HoD