Lesson Plan

Discipline: Computer Science & Engg.	**Semester:** Fifth (5th)	**Name of the Faculty:** Er Satabdi Palit
Subject: Software Engineering	**No. of days/week class allotted:** Five (5)	**Semester from Date:** 15.09.22 **to Date:** 22.12.22 **No. of Weeks:** 15
WEEK	**CLASS DAY**	**THEORY TOPICS**
1st	1st	Program vs. Software product.
	2nd	Emergence of Software Engineering.
	3rd	Computer Systems Engineering.
	4th	Software Life Cycle Models
	5th	Classical Water fall model.
2nd	1st	Iterative Water fall model
	2nd	Prototyping mode
	3rd	Evolutionary model.
	4th	Spiral model.
	5th	Review Class
3rd	1st	Responsibility of Project Manager
	2nd	Project Planning
	3rd	Metrics for Project size estimation (LOC and FP)
	4th	Project Estimation Techniques
	5th	COCOMO Models, Basic, Intermediate and

		complete
4th	1st	Scheduling
	2nd	Organization and Team structure
	3rd	Staffing
	4th	Monthly Test
	5th	Risk Management
5th	1st	Review Class
	2nd	Requirements gathering and analysis
	3rd	Software Requirement & Specification
	4th	Continue….
	5th	Content of SRS
6th	1st	Characteristics of good SRS
	2nd	Organization of SRS
	3rd	Techniques for representing complexing logic.
	4th	Review Class
	5th	What is a Good S/W design
7th	1st	Monthly Test
	2nd	Cohesion and coupling Neat arrangement
	3rd	S/W Design approaches. Structured analysis
	4th	Data Flow Diagrams

	5th	Symbols used in DFD Designing DFD
8th	1st	Developing DFD model of a system
	2nd	Shortcomings of DFD Structured design
	3rd	Principles of transformation of DFD to Structure Chart
	4th	Transform analysis and Transaction Analysis
	5th	Design Review
9th	1st	Review Class
	2nd	Characteristics of Good Interface Basic concepts of UID
	3rd	Types of User interfaces
	4th	Components based GUI development
	5th	Review Class
10th	1st	Monthly Test
	2nd	Coding
	3rd	Code Review Code walk through
	4th	Code inspections and software Documentation
	5th	Testing
11th	1st	Unit testing
	2nd	Black Box Testing
	3rd	Equivalence class partitioning and boundary value analysis
	4th	White Box Testing

	5th	Different White Box methodologies statement coverage branch coverage, condition coverage,
12th	1st	path coverage, cyclomatic complexity data flow based testing and mutation testing
	2nd	Debugging approaches
	3rd	Debugging guidelines
	4th	Integration Testing
	5th	Continue..
13th	1st	Phased and incremental integration testing
	2nd	System testing alphas beta and acceptance testing
	3rd	Performance Testing, Error seeding
	4th	General issues associated with testing
	5th	Review
14th	1st	Software Reliability
	2nd	Continue..
	3rd	Monthly Test
	4th	Different reliability metrics
	5th	Continue…
15th	1st	Reliability growth modeling
	2nd	Software quality
	3rd	Software Quality Management System
	4th	Review Class
	5th	Revision