

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

CSE	Semester:5th	Name of the Teaching Faculty:Manas Ranjan Ojha
Subject:Software Engineering	No of Days/per week class allotted:4	Semester from Date: 1.7.24 to Date: 18.11.24 No of Weeks:15
Week	Class Day	Theory/Practical Topics
1st	1st	Program vs. Software product ,Emergence of Software Engineering.
	2nd	Computer Systems Engineering,Software Life Cycle Models
	3rd	Classical Water fall model,Iterative Water fall model
	4th	Prototyping model
	5th	
2nd	1st	Evolutionary model
	2nd	Spiral model
	3rd	Software Project Management Responsibility of Project Manager
	4th	Project Planning
	5th	
3rd	1st	Metrics for Project size estimation(LOC and FP)
	2nd	Project Estimation Techniques
	3rd	COCOMO Models, Basic, Intermediate and complete
	4th	Scheduling
	5th	
4th	1st	Organization and Team structure
	2nd	Staffing
	3rd	Risk Management
	4th	Configuration Management
	5th	
5th	1st	Requirement Analysis and specification Requirements gathering and analysis
	2nd	Software Requirements Specification
	3rd	Contents of SRS
	4th	Characteristics of Good SRS
	5th	


 Sign of Faculty


 HOD


 Principal

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Week	Class Day	Theory/Practical Topics
6th	1st	Organization of SRS
	2nd	Techniques for representing complexing logic
	3rd	Software Design :What is a Good S/W design ,Cohesion and coupling
	4th	Neat arrangement ,S/W Design approaches
	5th	Structured analysis ,Data FlowDiagrams
7th	1st	Symbols used in DFD ,Designing DFD
	2nd	Developing DFD model of a system
	3rd	Shortcomings of DFD
	4th	Structured design
	5th	
8th	1st	Principles of transformation of DFD to Structure Chart
	2nd	Transform analysis and Transaction Analysis
	3rd	Design Review
	4th	User Interface Design :Characteristics of Good Interface
	5th	
9th	1st	Characteristics of Good Interface
	2nd	Basic concepts of UID
	3rd	Basic concepts of UID
	4th	Types of User interfaces
	5th	
10th	1st	Types of User interfaces
	2nd	Components based GUI development
	3rd	Components based GUI development
	4th	Software Coding & Testing :Coding
	5th	


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Week	Class Day	Theory/Practical Topics
11th	1st	.Code Review :Code walk through
	2nd	Code inspections and software Documentation
	3rd	Testing ,Unit testing ,Black Box Testing
	4th	Equivalence class partitioning and boundary value analysis
	5th	
12th	1st	White Box Testing
	2nd	Different White Box methodologies statement coverage branch coverage
	3rd	condition coverage, path coverage,
	4th	cyclomatic complexity data flow based testing and mutation testing
	5th	
13th	1st	Debugging approaches,Debugging guidelines,Integration Testing
	2nd	2Phased and incremental integration testing,System testing alphas beta and acceptance testing
	3rd	Performance Testing, Error seeding ,General issues associated with testing
	4th	Software Reliability :Software Reliability
	5th	
14th	1st	Different reliability metrics
	2nd	Different reliability metrics
	3rd	Reliability growth modeling
	4th	Reliability growth modeling
	5th	
15th	1st	Software quality
	2nd	Software quality
	3rd	Software Quality Management System
	4th	Software Quality Management System
	5th	

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