

PNS SCHOOL OF ENGG. & TECH., MARSHAGHAI DEPARTMENT OF COMPUTER SCIENCE ENGINEERING LESSON PLAN		
BRANCH : CSE	SEMESTER : 5TH	NAME OF THE TEACHING FACULTY : MR. BISWARANJAN SWAIN
SUBJECT : SOFTWARE ENGINEERING	NO. OF DAYS PER WEEK CLASS	SEMESTER FROM DATE: 01.07.2024 TO 08.11.2024
WEEK	CLASS DAY	THEORY TOPICS
1 ST	1 st	1. INTRODUCTION TO SOFTWARE ENGINEERING Program vs Software, Emergence of Software Engineering
	2 nd	Software life cycle model, Classical waterfall model
	3 rd	Classical water fall model
	4 th	Iterative water fall model
	5 th	Prototyping model
2 ND	1 st	Evolutionary model
	2 nd	Spiral model
	3 rd	2. SOFTWARE PROJECT MANAGEMENT Responsibility of Project Manager
	4 th	Project Planning
	5 th	Metrics for Project size estimation(LOC and FP)
3 RD	1 st	Project Estimation Techniques
	2 nd	COCOMO Models, Basic, Intermediate and complete
	3 rd	Scheduling
	4 th	Organization and Team structure
	5 th	Staffing
4 TH	1 st	Risk Management
	2 nd	Configuration Management
	3 rd	3. REQUIREMENT ANALYSIS AND SPECIFICATION Requirements gathering and analysis
	4 th	Contents of SRS
	5 th	Characteristics of Good SRS
5 TH	1 st	Organization of SRS
	2 nd	Techniques for representing complex logic
	3 rd	4. SOFTWARE DESIGN What is a Good S/W design, Cohesion
	4 th	Coupling, Neat arrangement
	5 th	S/W Design approaches, Structured analysis , Review
6 TH	1 st	Data Flow Diagrams, Symbols used in DFD
	2 nd	Designing DFD
	3 rd	Developing DFD model of a system
	4 th	Shortcomings of DFD, Structured design

	5th	Principles of transformation of DFD to Structure Chart
7TH	1st	Transform analysis and Transaction Analysis, Design Review
	2nd	Chapter review
	3rd	5. USER INTERFACE DESIGN Rules for UID
	4th	Interface design model, Interface design process and activities
	5th	Types of Interface
8TH	1st	Main aspects of Graphical UI, Text based interface
	2nd	Components GUI development
	3rd	Review
	4th	6. SOFTWARE CODING AND TESTING Coding standards and Guidelines
	5th	Code Review
9TH	1st	Testing, Unit testing
	2nd	Black-Box testing, Equivalence class partitioning and boundary value
	3rd	White-box testing, Statement coverage
	4th	Branch coverage, Condition coverage,
	5th	Cyclomatic complexity
10TH	1st	Debugging approaches, Debugging guidelines
	2nd	Integration testing
	3rd	System testing
	4th	Need for Stress testing and Error seeding
	5th	Issues associated with testing
11TH	1st	Review
	2nd	7. SOFTWARE RELIABILITY Importance of Reliability, H/w and S/w reliability
	3rd	Different reliability metrics
	4th	Reliability growth modelling
	5th	Software quality, Evolution of S/w quality management system
12TH	1st	Importance, Requirement of ISO 9000 Certification
	2nd	Procedure to gain ISO 9000 Certification
	3rd	Procedure to gain ISO9000 Certification
	4th	SEI Capability Maturity Model (CMM)
	5th	Review and doubt clear

Biswarayan Swain

SIGNATURE OF H.O.D

Biswarayan Swain

SIGNATURE OF LECTURER

JRER