

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: 01.08.2023 TO 30.11.2023
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

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

Biswaranjan Swain

SIGNATURE OF H.O.D

Biswaranjan Swain

SIGNATURE OF LEC