NM Institute Of Engineering and Technology, Bhubaneswar

DEPARTMENT:CSE

LESSON PLAN: Academic Year 2023-24 (Odd Semester) **COURSE: DIPLOMA** **SEMESTER: 5th**

Subject/Code: SOFTWARE ENGINEERING **Faculty Name: Sunanda Kumar Sahoo**

Sl. No.	Name of the Topic to Cover	Text Book	Teaching Method	Course Progress	Remark
1	Introduction to Software Engineering	T1	P		
2	Program vs. Software product	T3	G		
3	Emergence of Software Engineering.	T2	P		
4	Computer Systems Engineering	T2	G		
5	Software Life Cycle Models	T2	G		
6	Classical Water fall model, Iterative Water fall model	T3	G		
7	Prototyping model	T2	P		
8	Evolutionary model	T1	G		
9	5Spiral model	T1	G		
10	Software Project Management	T3	P		
11	Responsibility of Project Manager	T1	G		
12	Project Planning	T2	P		
13	Metrics for Project size estimation(LOC and FP)	T3	G		
14	Project Estimation Techniques	T2	G		
15	COCOMO Models, Basic, Intermediate and complete	T2	G		
16	Scheduling	T1	G		
17	Organization and Team structure	T3	P		
18	Staffing	T1	G		
19	Risk Management	T3	G		
20	Configuration Management	T2	G		
21	Requirements gathering and analysis	T3	G		
22	Software Requirements Specification	T2	P		
23	Contents of SRS	T3	G		
24	Characteristics of Good SRS	T2	G		
25	Organization of SRS	T1	G		
26	Techniques for representing complexing logic	T1	G		
27	What is a Good S/W design	T2	P		
28	Cohesion and coupling	T2	P		
29	Neat arrangement	T1	G		
30	S/W Design approaches	T3	G		
31	Structured analysis	T2	G		

32	Data FlowDiagrams .	T1	G		
33	Symbols used in DFD	T3	G		
34	Shortcomings of DFD	T3	P		
35	Developing DFD model of a system	T2	P		
36	Structured design	T1	G		
37	Principles of transformation of DFD to Structure Chart	T3	G		
38	Transform analysis and Transaction Analysis	T3	G		
39	Characteristics of Good Interface	T3	P		
40	Basic concepts of UID	T2	P		
41	Basic concepts of UID	T1	G		
42	Types of User interfaces	T2	G		
43	Components based GUI development	T3	G		
44	Coding ,Code Review	T1	G		
45	Testing,4Unit testing	T2	P		
46	Black Box Testing	T1	P		
47	Equivalence class partitioning and boundary value analysis	T3	G		
48	White Box Testing	T3	P		
49	Different White Box methodologies statement coverage branch coverage, co	T2	P		
50	Debugging approaches	T1	G		
51	Debugging guidelines	T2	P		
52	Integration Testing	T1	P		
53	Phased and incremental integration testing	T2	G		
54	System testing alphas beta and acceptance testing	T1	P		
55	Performance Testing, Error seeding	T2	P		
56	General issues associated with testing	T1	G		
57	Software Reliability,7.2 Different reliability metrics	T3	P		
58	Reliability growth modeling	T1	P		
59	Software quality	T1	G		
60	Software Quality Management System	T2	G		
			Method of Teaching		
			G: Green Board Teaching		
			P: Power Point Teaching		
Faculty Signature					

At the end of this course, students will be able to:

- Understand the concept of Software Engineering
- Understand how costs, schedule and quality drive a software project.
- Understand the role of software process and a process model in a project
- Understand planning and estimation of a software project,• Understand the role of SRS in a project and how requirements are validated
- Know the key design concepts of software engineering,• Learn the structured code inspection process
- Learn how testing is planned and testing done

TEXT BOOKS:

Rajib Mall Fundamentals of Software Engineering		
Deepak Jain Software Engineering:		
Reema Thereja Data Structure using C Oxford University Press		