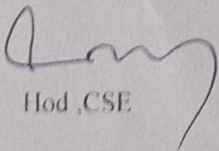# LESSON PLAN

SUB: SOFTWARE ENGINEERING
BRANCH:- COMPUTER SCIENCE& ENGG.
SEMESTER:5ᵗʰ
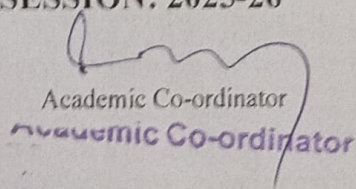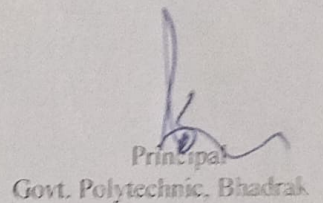NAME OF FACULTY: LAXMIDHAR SETHY (Sr. Lect . in CSE)

GOVERNMENT POLYTECHNIC, BHADRAK

SESSION: 2025-26

Hod ,CSE

Academic Co-ordinator
Academic Co-ordinator
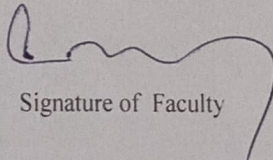
Principal
Govt. Polytechnic, Bhadrak

DEPARTMENT OF Computer Science & Engg.,

Discipline: Computer Science & Engineering	Semester: 5th, Winter - 2025	Name of the Faculty: LAXMI DHAR SETHY
Subject: Software Engineering	No. of Days/week:04	StartDate:14/07//2025 EndDate:15/11/2025

Week	Class Day	Theory Topics
1st	1st	**Unit-1:Introductiontosoftwareengineering** Program vs. Software product
	2nd	Emergence of software engineering.
	3rd	Computer Systems Engineering.
	4th	Software lifecycle models.
2nd	1st	Classical water fall.
	2nd	Iterative water fall models.
	3rd	Proto typing model.
	4th	Evolutionary model ,Spiral model.
3rd	1st	**Video content class using NPTEL Reference**
	2nd	**Unit-2:SoftwareProjectManagement** Responsibility of Project Manager , Project Planning.
	3rd	Project size estimation :line of control(LOC) and
	4th	Function point metric (FP).
4th	1st	Project estimation techniques
	2nd	Empirical estimation techniques
	3rd	Heuristic techniques
	4th	Analytical estimation techniques.
5th	1st	COCOMO models :Basic.
	2nd	COCOMO models :Intermediate and complete.
	3rd	Scheduling.
	4th	Organization structure ,Team structure.
6th	1st	Risk Management.

	2nd	Configuration Management.
	3rd	**Quiz Test-I**
	4th	**Assignment Evaluation and Discussion of Previous Year Questions.**
7th	1st	**Unit-3:RequirementAnalysisandSpecification** Requirement gathering and analysis
	2nd	Software Requirements Specification: Contents of SRS
	3rd	Characteristics and organization of SRS document.
	4th	Techniques for representing complexing logic
8th	1st	**Smart Class using NPTEL Reference**
	2nd	**Unit-4:Understanding the principles and methods of S/W design.** Importance of S/W design ,Design principles and concepts.
	3rd	Concept of Cohesion and coupling ,Classification of cohesiveness.
	4th	Classification of coupling ,Neat arrangement
9th	1st	S/W design approaches
		Structured an alysis methodology
	2nd	D F diagrams ,Listthe symbolsused in DFD.
		Construction developing of DFD ,Limitations of DFD.
	3rd	Structured design,Principles of transformation of DFD to Structure chart.
	4th	Trans for manalysis and transactionanalysis,DesignReview.
10th	1st	**Unit-5-Userinterfacedesign** CharacteristicsofGoodInterface
	2nd	Basicconceptsof UID
	3rd	TypesofUserinterfaces
	4th	ComponentsbasedGUIdevelopment
11th	1st	GraphicalUserInterfacevs.Text-basedUserInterface
	2nd	**VideocontentclassusingNPTELReference**
	3rd	**PracticeTest.**
	4th	**Unit-6:S/WcodingandTesting** Codingstandardsand guidelines.
12th	1st	CodeReview:Codewalkthrough,
	2nd	Codeinspectionsandsoftwaredocumentation.
	3rd	Testing.differenttypesoftesting,Unittesting.

	4th	Blackboxtesting,Methodsofblackboxtesting:Equivalence classpartitioningandboundaryvalueanalysis.
13th	1st	Whiteboxtesting,Methodologiesforwhiteboxtesting, Differentwhiteboxmethodologies:statementcoverage, condition coverage, branch coverage.
	2nd	Whiteboxmethodologies:pathcoverage, cyclomatic complexity,dataflowbasedtestingandmutationtesting
	3rd	Debugging approaches,Debuggingguidelines.
	4th	IntegrationTesting,Comparephasedandincremental integrationtesting.
14th	1st	Systemtesting,alphasbetaandacceptancetesting
	2nd	**QuizTest-II**
	3rd	**Unit-7:S/WReliability** S/Wreliability,ImportanceofS/Wreliability.
	4th	Differentreliabilitymetrics
15th	1st	Reliabilitygrowthmodelling.
	2nd	Softwarequality
	3rd	SoftwareQualityManagementSystem
	4th	**AssignmentEvaluationandDiscussionofPreviousYear Questions.**

Signature of Faculty