



GOVERNMENT POLYTECHNIC DARLIPALI, SUNDARGARH

ସରକାରୀ ବହୁବୃତ୍ତି ଅନୁଷ୍ଠାନ ଦଲିପାଲି, ସୁନ୍ଦରଗଡ଼

GOVERNMENT OF ODISHA | ଓଡ଼ିଶା ସରକାର

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A/ P: Darlipali, NTPC Darlipali, Dist.: Sundargarh, Odisha- 758001

LESSON PLAN

Discipline: Electrical Engg.			Semester: 4th	Name of the Teaching faculty: Manmatha Behera (Lecturer Stage-I in Electrical)	
Subject: Linear Control Systems Subject Code: EEPE202(B) TH:4(B)			No of Days/Week class allotted: 3	Semester from Date: 24/12/2025 to 18/04/2026 No. of Periods available: 47	No of weeks: 16
Month	Week	No of periods available	Class Day	Theory topics to be covered	
DECEMBER	1st	3P	1	Feedback principle	
			2	Transfer function of LTI systems-Mechanical and Electromechanical systems	
			3	Force voltage and force current analogy	
JANUARY	2nd	3P	1	Block diagram representation	
			2	Block diagram reduction-1	
			3	Block diagram reduction-2	
	3rd	3P	1	signal flow graph	
			2	Mason's gain formula	
			3	characteristic equation	
	4th	3P	1	DC and AC servo motors	
			2	synchro - gyroscope	
			3	stepper motor	
5th	3P	1	Tacho generator		
		2	Time domain analysis of control system		
		3	Transient and steady state responses		
FEBRUARY	6th	3P	1	time domain specifications - first and second order systems	
			2	step responses of first and second order systems	
			3	Question answers discussion	
	7th	3P	1	Steady-state error analysis	
			2	static error coefficient of type 0, 1, 2 systems	
			3	Dynamic error coefficients	
	8th	3P	1	Concept of stability	
			2	Time response for various pole locations	
			3	stability of feedback system	
	9th	3P	1	Routh's stability criterion-1	
			2	Routh's stability criterion-2	
			3	Question answers discussion	
MARCH	10th	3P	1	General rules for constructing Root loci	
			2	stability from root loci	
			3	effect of addition of poles and zeros	
	11th	3P	1	Lag compensators	
			2	Lead compensators	
			3	Lead-Lag compensators	
	12th	3P	1	Nyquist stability criterion	
			2	Nichols chart	
			3	Non-minimum phase system	
13th	3P	1	transportation lag		
		2	Frequency domain specifications		
		3	Analysis based on Bode plot-1		
APRIL	14th	3P	1	Analysis based on Bode plot-2	
			2	Log magnitude vs. phase plot	
			3	State space model	
	15th	3P	1	State space model	
			2	State Transition matrix	
			3	Question answers discussion	
16th	2P	1	Previous year questions		
		2	Previous year questions		

Manmatha Behera
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Lecturer in Electrical Engg.

HOD
HOD 22/12/25 -
Electrical Engg.

Principal
Principal
G.P. Darlipali