

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2025/26 (Winter)

Discipline : ELECTRICAL		Semester: 6th Sem	Name of the Teaching Faculty :Hemanta Ku. Sethi	
Subject : CSE		No. of Days / per week class allotted : 05	Semester From date : 22.12.2025 To Date : 18.04.2026	
MONTH	Week	Day	Unit	Topics
DECEMBER	4th	1st	UNIT-1	1. FUNDAMENTAL OF CONTROL SYSTEM: Commencement of classes
		2nd	UNIT-1	Classification of Control system
		3rd	UNIT-1	Open loop system & Closed loop system and its comparison
		4th	UNIT-1	Effects of Feed back
		5th	UNIT-1	Standard test Signals (Step, Ramp, Parabolic, Impulse)
	5th	1st	UNIT-2	2. MATHEMATICAL MODEL OF A SYSTEM: Readmission week
		2nd	UNIT-2	Transfer Function & Impulse response
		3rd	UNIT-2	Properties, Advantages & Disadvantages of Transfer Function
		4th	UNIT-2	Poles & Zeroes of transfer Function
		5th	UNIT-2	Simple problems of transfer function of network
JANUARY	1st	1st	UNIT-2	Mathematical modeling of Electrical Systems (R, L, C)
		2nd	UNIT-2	Analogous systems
		3rd	UNIT-2	Solving numerical problems
		4th	UNIT-2	Unit-2 Revision and Question Discussion
		5th	UNIT-2	Class Assessment on Mathematical Modeling
	2nd	1st	UNIT-3	3. CONTROL SYSTEM COMPONENTS: Components overview
		2nd	UNIT-3	Gyroscope and Synchronos
		3rd	---	HOLIDAY: MAKAR SANKRANTI (14.01.2026)
		4th	UNIT-3	Tachometer principles
		5th	UNIT-3	DC servomotors - Construction
	3rd	1st	UNIT-3	DC servomotors - Operation
		2nd	UNIT-3	AC Servomotors - Construction
		3rd	UNIT-3	AC Servomotors - Characteristics
		4th	UNIT-3	Comparative study of Servomotors
		5th	UNIT-3	Question Discussion on Control Components
		1st	UNIT-4	4. BLOCK DIAGRAM ALGEBRA: Basic Elements
		2nd	UNIT-4	Canonical Form of Closed loop Systems

	4th	3rd	UNIT-4	Rules for Block diagram reduction	
		4th	UNIT-4	Procedure for Reduction of Block Diagram	
		5th	---	HOLIDAY: NETAJI JAYANTI / BASANTA PANCHAMI	
	5th	1st	---	HOLIDAY: REPUBLIC DAY (26.01.2026)	
		2nd	UNIT-4	Simple Problem for equivalent transfer function	
		3rd	UNIT-4	Basic Definition in Signal Flow Graph & properties	
		4th	UNIT-4	Construction of Signal Flow graph from Block diagram	
		5th	UNIT-4	Mason's Gain formula	
	FEBRUARY	1st	1st	---	MONTHLY TEST - 1 (02.02.2026)
			2nd	---	MONTHLY TEST - 1 (03.02.2026)
3rd			UNIT-4	Simple problems in Signal flow graph for network	
4th			UNIT-5	5. TIME RESPONSE ANALYSIS: Time response overview	
5th			UNIT-5	Standard Test signals: Step and Ramp	
2nd		1st	UNIT-5	Standard Test signals: Parabolic and Impulse	
		2nd	UNIT-5	Time Response of first order system with Unit step	
		3rd	UNIT-5	Time Response of first order system with Unit impulse	
		4th	UNIT-5	Numerical problems on first order systems	
		5th	UNIT-5	Time response of second order system to unit step input	
3rd		1st	---	1st Mentoring Session (05.02.2026)	
		2nd	---	1st Mentoring Session (06.02.2026)	
		3rd	---	1st INTERNAL ASSESSMENT / Exam Registration week	
		4th	UNIT-5	Derivation of rise time and peak time	
		5th	UNIT-5	Peak overshoot and settling time derivation	
4th		1st	---	Technical Seminar by expert - 1 (13.02.2026)	
		2nd	UNIT-5	Steady state error and error constants	
		3rd	UNIT-5	Types of control system (Type-0, 1, 2)	
		4th	UNIT-5	Effect of adding poles and zero to transfer function	
		5th	UNIT-5	Response with P, PI, PD and PID	
1st		1st	UNIT-5	Question Discussion on Unit-5	
		2nd	---	HOLIDAY: DOLA PURNIMA (03.03.2026)	
		3rd	---	HOLIDAY: HOLI (04.03.2026)	
		4th	UNIT-6	6. ANALYSIS OF STABILITY BY ROOT LOCUS: Concept	
		5th	UNIT-6	Construction of root loci	
	1st	---	2nd Mentoring Session (06.03.2026)		

MARCH	2nd	2nd	---	2nd Mentoring Session (07.03.2026)
		3rd	UNIT-6	Rules for construction of the root locus
		4th	UNIT-6	Effect of adding poles and zeros to G(s) and H(s)
		5th	UNIT-6	Solving numerical problems on root locus
	3rd	1st	UNIT-7	7. FREQUENCY RESPONSE ANALYSIS: Introduction
		2nd	UNIT-7	Correlation between time and frequency response
		3rd	UNIT-7	Polar plots construction
		4th	---	Technical Seminar by expert - 2 (20.03.2026)
		5th	---	HOLIDAY: ID-UL-FITRE (21.03.2026)
	4th	1st	---	2nd INTERNAL ASSESSMENT WEEK
		2nd	UNIT-7	Bode plots construction
		3rd	UNIT-7	All pass and minimum phase system
		4th	UNIT-7	Computation of Gain margin and phase margin
		5th	---	HOLIDAY: SHREE RAM NABAMI (27.03.2026)
	APRIL	1st	1st	UNIT-7
2nd			UNIT-7	Closed loop frequency response
3rd			---	HOLIDAY: UTKAL DIVAS (01.04.2026)
4th			UNIT-7	Question Discussion: Frequency Response Analysis
5th			---	HOLIDAY: GOOD FRIDAY (03.04.2026)
2nd		1st	---	2nd Parents Meeting (04.04.2026)
		2nd	UNIT-8	8. NYQUIST PLOT: Nyquist stability criterion
		3rd	UNIT-8	Nyquist stability criterion applied to inverse polar plot
		4th	UNIT-8	Assessment of relative stability
		5th	UNIT-8	Constant M and N circle
3rd		1st	---	MONTHLY TEST - 2 (CBT BASED) (13.04.2026)
		2nd	---	HOLIDAY: AMBEDKAR JAYANTI / MAHABISHUBA SANKRANTI
		3rd	---	MONTHLY TEST - 2 (CBT BASED) (15.04.2026)
		4th	UNIT-8	Nicholas chart; Semester Question Discussion
		5th	---	CLOSING OF ATTENDANCE (18.04.2026)