

GOVERNMENT CO.ED POLYTECHNIC RAIPUR (C.G.)

DEPARTMENT OF ELECTRICAL ENGINEERING

LESSON PLAN

Session: NOV-DEC 2022

Session start as per university calendar:

Course Name: Electrical and Electronic Measurements

Name of Subject Teacher: **Mamta Patel**

Lecturer plan T+P = 5

Course code: 2024372(024)

Discipline: EE		Semester: 3RD		Class room Instruction Start Date:				
No. Chapter No.	Topics	Sub Topic to be covered under this unit	Total hours	No. of periods planned	Actual No of periods taken	Date of Class Conduction	Use of AV resources if any	Remarks if any
1	Basics of Measurements & Measuring Instruments	Block Diagram of measuring systems, requirements	15	3	2	11/09/24 12/09/24	NA	
		Production of deflecting, controlling and damping torques		3	2	13/09/24 14/09/24		
		Indicating, Recording and Integrating Instruments		4	2	18/09/24 19/09/24		
		Electromechanical measuring instruments: General description including working principle,		5	3	20/09/24 21/09/24 25/09/24		
2	Electro-mechanical measuring Instruments	Principle of current and voltage measurement	18	3	1	26/09/24	NA	
		Galvanometer, Ammeter, Voltmeter		3	2	27/09/24 28/09/24		
		Range Extension of ammeter and voltmeter		3	2	30/09/24 1/10/24		
		Principle of Power and energy, Measurement, effect of power factor		3	2	3/10/24 4/10/24		
		Working of Digital energy meter, Block diagram		3	2	7/10/24 8/10/24		
		Measurement of single and three phase power using wattmeter		3	2	9/10/24 14/10/24		
3	Measurements using Bridges/meters	Classification of resistances-Low, Medium, High	17	2	2	15/10/24 16/10/24	NA	
		Concept of bridge, balancing		2	2	17/10/24 18/10/24		
		Low resistance Measurement - Kelvin double bridge		2	2	19/10/24 21/10/24		
		Medium resistance measurement Wheatstone bridge		3	2	23/10/24 24/10/24		
		High resistance measurement using Megger		3	2	4/11/24 5/11/24		
		Earth resistance measurement using earth tester		3	2	6/11/24 8/11/24		
		Inductance Measurement using Maxwell's Bridge		2	2	9/11/24 14/11/24		

4	Electronic instruments	Essentials and advantages of electronic instruments	15	3	2	16/11/24 18/11/24	NA
		True RMS reading voltmeter.		4	2	19/11/24 20/11/24	
		Digital LCR meter- Block diagram, Working principle		4	2	21/11/24 22/11/24	
		Analog/Digital recorders, Graphic recorder, Strip Chart recorder, XY recorder		4	2	23/11/24 26/11/24	
5	Cathode Ray Oscilloscope and Digital Storage Oscilloscope	CRO-basic clock diagram, Cathode Ray Tube, Electrostatic and	10	3	2	29/11/24 3/12/24	NA
		magnetic deflection, X & Y Amplifiers, Controls on CRO and their functions, Lissajous pattern		3	2	4/12/24 6/12/24	
		Digital Storage Oscilloscope- Basic block diagram and working		4	2	7/12/24 9/12/24	
			75 Hours				

CPH