BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF APPLIED ELECTRONICS & INSTRUMENTATION ENGG.

LESSON PLAN
OF
ELECTRICAL AND ELECTRONIC MEASUREMENTS

(4Th Semester, AE&I)

By
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Lecturer, AE&I

Period	Week	Date	Topics to be covered
1	1	22.12.2026	**UNIT-1:**Different Measuring Instrument 1.1 Comparison between analog & digital measuring instrument
2		03.01.2026	1.2 Permanent Magnet Moving Coil Instruments (PMMC)
3		05.01.2026	1.3 Moving Iron type Instruments (MI)
4	2	08.01.2026	1.4 Electro Dynamo Type Instruments
5		12.01.2026	1.5 Measurement of Electric Energy: Single and three phase electronic energy meter: Constructional features and working principle
6		15.01.2026	1.5 Measurement of Electric Energy: Single and three phase electronic energy meter.
7	3	17.01.2026	Constructional features and working principle
8		17.01.2026	Errors and their compensations. Calibration ofsingle phase electronic energy meter using direct loading..
9		19.01.2026	1.6 Megger and earth tester
10	4	22.01.2026	**UNIT-2:**Bridge Circuits and Potentiometers 2.1 DC Bridges – Wheatstone and Kelvin Double Bridge
11		29.01.2026	2.1 DC Bridges – Wheatstone and Kelvin Double Bridge
12		31.01.2026	2.2 AC Bridges - Maxwell's Bridge, Hay's Bridge, Anderson Bridge, DeSauty's Bridge Potentiometer
13	5	31.01.2026	2.2 AC Bridges - Maxwell's Bridge, Hay's Bridge, Anderson Bridge, DeSauty's Bridge, Potentiometer
14		02.02.2026	2.2 AC Bridges - Maxwell's Bridge, Hay's Bridge, Anderson Bridge, DeSauty's Bridge, Potentiometer
15		05.02.2026	2.2 AC Bridges - Maxwell's Bridge, Hay's Bridge, Anderson Bridge, DeSauty's Bridge Potentiometer
16	6	07.02.2026	2.2 AC Bridges - Maxwell's Bridge, Hay's Bridge, Anderson Bridge, DeSauty's Bridge Potentiometer
17		07.02.2026	2.3 Basic DC slide wire Potentiometer, Crompton's DC Potentiometer, Applications of DC Potentiometer
18		09.02.2026	2.3 Basic DC slide wire Potentiometer, Crompton's DC Potentiometer, Applications of DC Potentiometer
19	7	12.02.2026	2.3 Basic DC slide wire Potentiometer, Crompton's DC Potentiometer, Applications of DC Potentiometer
20	8	16.02.2026	2.4 AC Potentiometers, Applications of AC Potentiometers
21		19.02.2026	2.4 AC Potentiometers, Applications of AC Potentiometers
22		21.02.2026	**Revision/ TEST of Unit-I & Unit-II**
23	9	21.02.2026	**UNIT-3:**Frequency, power, high voltage and current

			measurement 3.1 Name of different frequency meter
24		23.02.2026	3.2 Operation of Electronic frequency counter for the measurement of frequency and time period
25		26.02.2026	3.3 Power Measurement by bolometer & calorimetric method
26	10	02.03.226	3.3 Power Measurement by bolometer & calorimetric method
27		05.03.2026	3.4 Active and reactive power measurement: One, two and three wattmeter method
28		07.03.2026	Effect of Power factor on wattmeter reading in two wattmeter method
29	11	07.03.2026	Effect of Power factor on wattmeter reading in two wattmeter method
30		09.03.2026	3.5 Current Transformers and Potential Transformers – Ratio and Phase Angle errors
31		12.03.2026	3.5 Current Transformers and Potential Transformers – Ratio and Phase Angle Errors
32	12	16.03.2026	**UNIT-4:**CRO and its Application: 4.1 Block diagram of CRO
33		19.03.2026	4.2 Cathode Ray Tube, Deflection Amplifier, Time base generator, Delay line.
34	13	23.03.2026	4.3 Electrostatic deflection technique. Automatic synchronization of time base.
35		26.03.2026	4.4 Basic control of CRO 4.5 Different types of probes
36		30.03.2026	4.6 Dual trace, dual beam CRO
37	14	02.04.2026	4.7 Measurement of time period, phase, delay time, frequency by CRO
38		04.04.2026	**Revision/ TEST of Unit-III & Unit-IV**
39	15	04.04.2026	**UNIT-5:**Electronic Instruments 5.1 Electronic Voltmeter and Digital Voltmeter: need, working and basic block diagram
40		06.04.2026	5.2 Electronic Multimeters
41		09.04.2026	5.3 Signal generator
42	16	13.04.2026	5.4 Function generator
43		16.04.2026	5.5 Q – Meter
44	17	18.04.2026	5.6 Vector Impedance Meter
45		18.04.2026	**Revision / TEST of Unit-V**

Signature Of Faculty

Signature of HOD