VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
(AUTONOMOUS)
DEPARTMENT OF ELECTRICAL AND ELECTROONICS ENGINEERING
LESSON PLAN

SUB.CODE& NAME: **U15EE304** & ELECTRICAL MEASUREMENTS AND INSTRUMENTATION

YEAR / SEMESTER: II YEAR / IV SEMESTER A

Session No.	Topics to be Covered	Duration in minutes	Teaching Aid	Ref.Book
UNIT-I ELECTRICAL MEASUREMENTS				
1	Introduction	45	Black Board	T1&T2
2	Measurements	45	Black Board	T1&T2
3	Errors & classification	45	Black Board	T1&T2
4	Measurement of voltage & Voltage	45	Black Board	T1&T2
5	permanent magnet moving coil meters	45	Black Board	T1&T2
6	Moving iron meters	45	Black Board	T1&T2
7	Digital voltmeters	45	Black Board	T1&T2
8	automation, guarding techniques	45	Black Board	T1&T2
9	Activity hour			
UNIT- II MEASUREMENT OF POWER AND ENERGY				
10	Introduction	45	Black Board	T1
11	Measurement of power	45	Black Board	T1
12	Measurement of Energy	45	Black Board	T1
13	Dynamometer and induction instruments	45	Black Board	T1
14	KVAh and KVARh meters	45	Black Board	T1
15	maximum demand indicators, digital multi-meters	45	Black Board	T1
16	Current and Potential transformers.	45	Black Board	T1
17	Spectrum Analyzers, Data & Logic Analyzers.	45	Black Board	T1
18	Activity hour			
UNIT –III MEASUREMENT OF RESISTANCE, INDUCTANCE AND CAPACITANCE				
19	Introduction	45	Black Board	T1
20	Measurement of resistance using bridges	45	Black Board	T1
21	Measurement of inductance using bridges	45	Black Board	T1

22	Measurement of capacitance bridges	45	Black Board	T1
23	Transducers – Position transducers,	45	Black Board	T1
24	force transducers.	45	Black Board	T1
25	peizo-electric transducers			
26	Hall effect transducers, Temperature measurement	45	Black Board	T1
27	Activity hour			
UNIT – IV ELECTRONIC MEASUREMENTS				
28	Introduction	45	Black Board	T1&T2
29	Signal sources – Oscillators	45	Black Board	T1&T2
30	Function generator, Pulse generators	45	Black Board	T1&T2
31	Oscilloscopes - CRO	45	Black Board	T1&T2
32	Digital storage and Analog storage Oscilloscope.	45	Black Board	T1&T2
33	Digital Phosphor Oscilloscopes.	45	Black Board	T1&T2
34	Analog & Digital Recorders	45	Black Board	T1&T2
35	Printers.	45	Black Board	T1&T2
36	Activity hour			
UNIT – V INSTRUMENTATION				
37	Introduction	45	Black Board	T1&T3
38	Signal conditioners	45	Black Board	T1&T3
39	Instrumentation amplifiers	45	Black Board	T1&T3
40	Voltage – current converters	45	Black Board	T1&T3
41	Voltage-frequency converters	45	Black Board	T1&T3
42	Analog multiplexers and de-multiplexers	45	Black Board	T1&T3
43	Instruments Used in Computer Controlled Instrumentation	45	Black Board	T1&T3
44	Microprocessor Based Measurements	45	Black Board	T1&T3
45	Activity hour			

TEXT BOOK

1. Sawhney A.K. A Course in Electrical and Electronic Measurements and Instrumentation', Dhanpat Rai & Co., 1st Edition, 2014
2. W. D. Cooper, 'Electronic Instrumentation and Measurement Techniques', Prentice Hall of India Publications, 1st Edition, 2014.
3. Bouwens A. J., 'Digital Instrumentation', Tata McGraw Hill Publications, 16threprint (2015.

WEBSITE LINKS :

1.https//books.google.co.in

2. https//accessengineeringlibrary.com

3.www.nptel.ac.in

4.www.learnerstv.com/free-engineering video-lectures

5.www.dea.blogspot.co.in