

## ELECTRONIC MEASUREMENTS & INSTRUMENTATION LAB PCC-ECE202-P

Course Credits : 2 Contact Hours : 4 per week per group (L T P : 0 0 4) Mode : Lab Work	<b>Course Assessment (Internal: 30; External: 70)</b>
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**Pre-requisites:** Knowledge of basic electronic components.

Sr. No.	Course Outcomes At the end of the semester, students will be able to :	RBT Level
CO 1	Describe measuring instruments.	L1
CO 2	Understand and explain working of waveform generators, waveform analyzers, and transducers.	L2
CO 3	To operate various measuring instruments.	L3
CO 4	To analyze performance of waveform generators, waveform analyzers, transducers.	H1

### List of Experiments

1. To find Resolution, accuracy & Precision for analog multi meter.
2. To analyze digital multimeter for various measurements.
3. To study the front panel controls of CRO.
4. To find frequency, time and phase difference for waveforms of choice using CRO
5. To find rise time and fall time for waveforms of choice using CRO
6. To study and observe Lissajous Figures on CRO.
7. To study the front panel controls of function generator.
8. To find and observe harmonics of waveforms of choice using spectrum analyzer.
9. To study measurement of different components & parameters like Q of a coil etc using LCR Q meter.
10. To find least count of micrometer.
11. To study and analyze working of LVDT.
12. To measure distance using LDR.
13. To measure temperature using R.T.D.
14. To measure temperature using Thermocouple.
15. To measure strain using Strain Gauge.
16. To measure pressure using Piezo-Electric Pick up.
17. To measure distance using Capacitive Pick up.
18. To measure distance using Inductive Pick up.
19. To measure speed of DC Motor using Magnetic Pick up.
20. To measure speed of DC Motor using Photo Electric Pick up.

**NOTE:** At least twelve experiments are to be performed in the semester, out of which at least eight experiments should be performed from above list. Remaining experiments may either be performed from the above list or designed & set by the concerned institution as per the scope of the syllabus.